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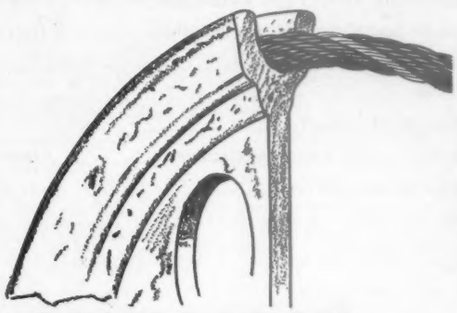
HOW SHEAVE MATERIALS AFFECT WIRE ROPE SERVICE

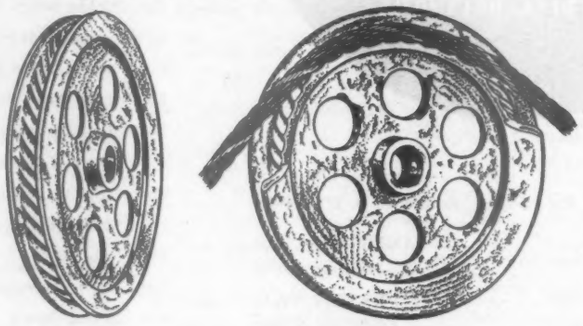
No. 2 in a series of informative articles for wire rope users, prepared by the MACWHYTE *wire rope company*

WATCH YOUR SHEAVES! *And Get Longer Wire Rope Service*

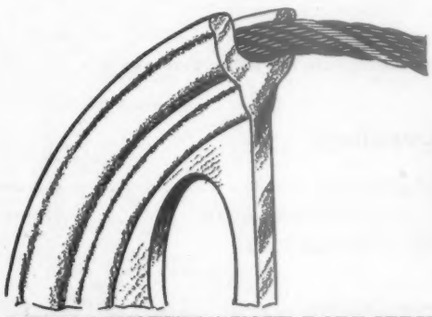


1. THIS DAMAGES YOUR ROPE

(a) Deep scoring of soft sheaves, pinch the rope and cause it to scrub on sheave flange.

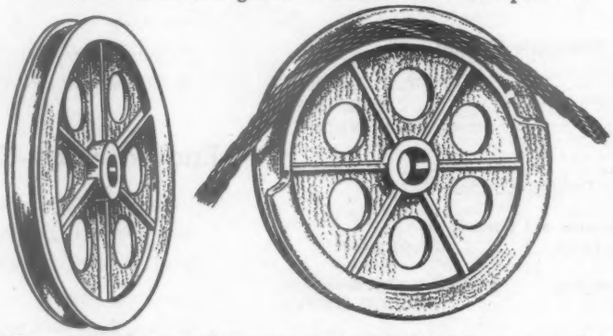


(b) SOFT SHEAVE often corrugates. A new rope does not "track" in the corrugations — Result — less wire rope service.



2. THIS LENGTHENS YOUR ROPE SERVICE

(c) A hard sheave does not easily score deeply and damage the rope.



(d) The smooth wearing surface of a hard sheave gives the rope a smooth bearing surface that lengthens the life of both sheave and wire rope.

NOTE: *Tear out . . . put in your wire rope maintenance file*

3. IT IS FALSE ECONOMY to Operate Wire Rope Over Badly Scored and Corrugated Sheaves. **WATCH YOUR SHEAVES . . . Keep Them Smooth . . . And Get Longer Wire Rope Service!** The benefit of our experience on any problem pertaining to wire rope and its use is yours for the asking. It is part of our friendly service.

Contradictory as it may seem, a *soft* iron sheave that wears rapidly will cause more wear on a wire rope than sheaves made with *harder* materials.

Why Soft Sheaves Cause More Wear on Wire Rope.

A sheave of softer material than the wire rope is likely to take an impression of the wire rope and become deeply scored and corrugated, presenting a ragged surface which damages the rope and causes excessive wear.

A NEW WIRE ROPE USED ON A CORRUGATED SHEAVE WILL NOT "TRACK" IN THE CORRUGATIONS MADE BY THE PREVIOUS ROPE. IT WILL WEAR RAPIDLY AND NOT GIVE MAXIMUM SERVICE. THE GROOVE WILL ALSO WEAR DEEP AND THE FLANGE OF THE SHEAVE WILL CAUSE EXCESSIVE WEAR.

Why Hard Sheaves Increase Wire Rope Service.

Sheaves made of harder materials...such as carbon steel, manganese, other alloys, or "work-hardening" steels . . . wear smooth, last longer and allow the rope to give the best service.

MACWHYTE COMPANY
KENOSHA, WISCONSIN

Manufacturers of PREformed, Internally Lubricated, Laboratory Tested, and Field Proved Wire Ropes, and Braided Wire Rope Slings for every use.
New York . . . Pittsburgh . . . Chicago . . . Ft. Worth . . . Portland . . . Seattle . . . San Francisco.
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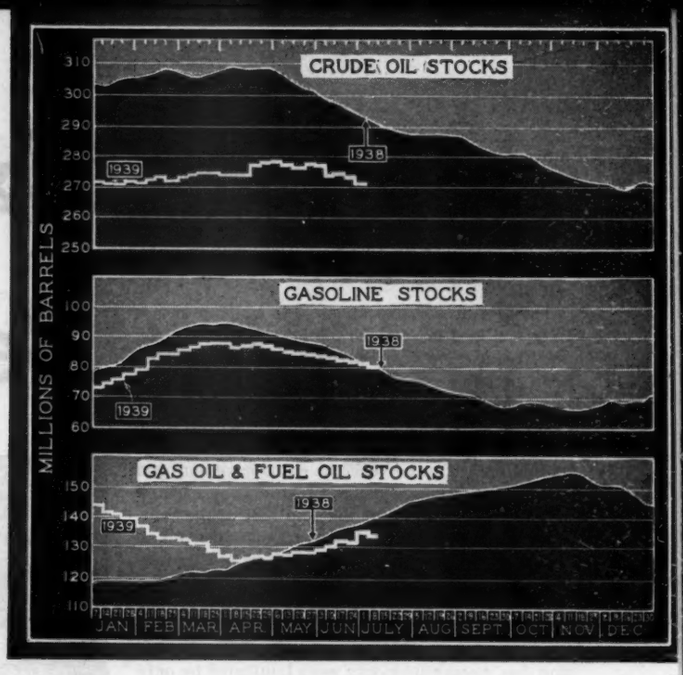
REPRINTS AVAILABLE *of this and other informative articles on wire rope. Simply address: Macwhyte Co., Dept. 422, Kenosha, Wis.*

Trends

Production Gains Not Warranted by Available Markets



THE 82,440-bbl. daily increase in crude oil production last week came as a surprise to those who were confident that July production at no time would exceed the Bureau of Mines estimate of demand for this month. The large gain in crude output was the result of increases in several states most of which produced in excess of both B. of M. recommendations and state allowables.

CRUDE PRODUCTION *3,542,725 bbl. daily average—up 82,440 bbl. One year ago 3,266,399 bbl.*

CRUDE STOCKS *271,567,000 bbl. as of July 1—down 730,000 bbl. One year ago 291,666,000 bbl.*

GASOLINE STOCKS *80,823,000 bbl. as of July 8—down 279,000 bbl. One year ago 79,550,000 bbl.*

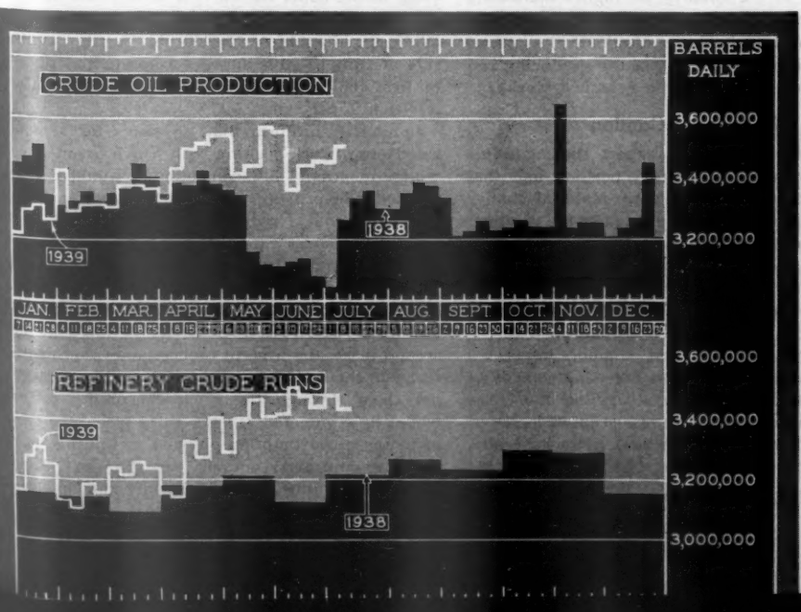
GAS AND FUEL OIL STOCKS *135,167,000 bbl. as of July 8—down 1,686,000 bbl. One year ago 139,315,000 bbl.*

REFINERY RUNS *3,420,000 bbl. daily week ending July 8—down 60,000 bbl. One year ago 3,221,000 bbl.*

Information from major purchasers the first of the week indicated there are no ready outlets for the additional crude and in most areas the increases will further complicate situations in which part of the crude has been selling under the market for some time. The situation in the Louisiana Gulf area, where a new record in production was established, is said to be especially critical. Considerable interest is manifested in the reorganization of the conservation department in that state, with speculation as to whether the new regime under Governor Long will be more cooperative with the heads of other states in perfecting a national proration program. Those in daily contact with conditions say that the Louisiana Gulf Coast is one of the weakest spots in the crude market at this time, with curtailment rather than expansion in production needed.

It is indicated that Oklahoma will have to reduce its production from last week's levels. That state, the first of the month, lost additional markets to Illinois, and further reductions are in prospect for August and September. The Kansas situation is similar.

It is now believed that Illinois production will reach a peak of at least 300,000 bbl. daily by early fall, when additional pipe line outlets will be available. Efforts are now being made to project the production curves covering Illinois crude output after the peak has been reached. It is believed that owing to the nature of the formations and the operating practices that have prevailed from the discovery of the field, there will be a rapid decline from the peak output of the Salem field, which last week produced 148,060 bbl. daily.



DAILY AVERAGE PRODUCTION FOR WEEK

	July 8, 1939	Bur. Mines July est. of demand	July state allowables	July 1, 1939
Oklahoma City	103,900	.....	.....	90,800
Seminole fields	47,625	.....	.....	47,950
Remainder of state	312,900	.....	.....	313,200
Total Oklahoma	464,425	456,100	428,000	451,950
East Texas	373,000	.....	.....	372,798
West Texas	227,398	.....	.....	218,900
North Central Texas	119,058	.....	.....	118,697
Texas Panhandle	83,347	.....	.....	69,000
East Central Texas	101,040	.....	.....	92,296
Gulf Coast Texas	347,297	.....	.....	341,850
Southwest Texas	96,546	.....	.....	98,600
Total Texas	1,347,686	1,426,500	1,355,598	1,312,141
North Louisiana	71,705	.....	.....	71,640
Gulf Coast Louisiana	203,048	.....	.....	199,600
Total Louisiana	274,753	264,500	263,023	271,240
California	604,750	595,200	595,000	594,100
Kansas	167,600	160,300	165,890	169,100
Arkansas	59,540	53,900	57,641	59,005
Eastern fields	97,900	105,900	.....	96,000
Illinois	261,115	187,400	.....	244,065
Michigan	69,126	53,200	.....	68,604
New Mexico	115,940	116,100	113,000	116,780
Rocky Mountain area	79,890	94,100	.....	77,300
Total United States	3,542,725	3,513,200	.....	3,460,285

Developments in refinery markets since the first of the month have not been favorable. The general advances in gasoline prices supported by several companies were not maintained. Posted dealer prices have been advanced to normal at many subnormal points, but competitive conditions last week resulted in scattered reductions at important consuming centers. Prices of gasoline tankcar sales reflected a weak condition in several refining centers. Kerosene, distillate and gas oil, which closed the main consuming season in a strong position last May, are reported weak in most areas although sales of oil burners indicate a record demand for furnace oils starting this fall. Contract prices on these oils covering the coming year are generally lower than those in effect for the 1938-1939 season.

Excess of Supplies Benefits of Record

NEW YORK, July 10.—With gasoline stocks more than they were a year ago for the first time this year, reflecting a comparatively slow seasonal decline in inventories over the past few weeks, petroleum economists here are stressing the necessity for further curtailment in refinery operations through the remaining summer and fall months.

The fact that recent advances in gasoline prices have not been maintained over a large part of the country also emphasizes the need for a reduced level of plant operations, which would assure a much lower gasoline inventory in the fall than now appears probable. While there has been some improvement in gasoline prices over those prevailing earlier in the year, the gains have not been sufficient to change materially the poor earning statements indicated for the first half of the year.

Interpretation of the motor-fuel market depressants into terms of crude-price prospects is hardly less difficult than at earlier stages of the summer. In addition to the fact that the industry is now carrying higher motor-fuel inventories than at the same time in 1938, there is the further revelation that motor-fuel stocks were liquidated by only 3,000,000 bbl. during June this year, compared to withdrawal of 6,000,000 bbl. in 1938, a decidedly unhealthy condition.

Opinions of sales and operating executives on prospects for the remainder of the summer can be divided into two main classifications. One group believes the industry will "worry" along without material change in the market for crude and products until early fall. Another group is less optimistic and thinks a more substantial improvement in the motor-fuel market must develop within 30 days if producing branch is to avoid a reduction.

Practically all executives are in agreement that consumption is approximately equal to anticipations and believe that domestic demand during July, August, and September may increase as much as 6 per cent over 1938. Domestic demand during July, August, and September, 1938, totaled 143,991,000 bbl. of motor fuel. Assuming the full increase of 6 per cent will be realized in the same three months this year, the industry will be called upon to supply about 152,630,000 bbl. of gasoline.

Inventory Higher Than Year Ago

At the start of July the industry had 81,102,000 bbl. of motor fuel on hand. This year's gasoline inventory on July 1 compared to 80,408,000 bbl. at the same time in 1938. If the industry is to attain the economic desired position of 62,000,000 bbl. of motor fuel on hand September 30, advocated by many economists in the business, it means that 19,102,000 bbl. must come from storage during the 92-day period. Deducting the desired withdrawals from storage from the maximum demand of 152,630,000 bbl. between July 1 and September 30 leaves requirements of 133,528,000 bbl. to come from current refinery production.

Assuming that gasoline yield will continue to range around 44 per cent of crude charged to stills, the industry needs to process only 3,298,600 bbl. daily average during the 92 days. During the past 5 or 6 weeks the industry has charged to stills a daily average of 3,455,000 bbl. of crude. This means that the refinery operators must pull in their belts to the extent of 156,400 bbl. per day in throughput.

The current excess of motor fuel is not equally distributed throughout the industry and consequently the weaknesses are appearing in the most damaging territories. A few Gulf Coast refiners displayed the first signs of nervousness last week when they reduced prices on coastwise cargoes of low-octane motor fuel an eighth of a cent per gallon. Although the cargo-price reduction by no means blanketed the industry, it applied to sufficient current and potential volume to depress immediately the New York and New England tankcar and tank-wagon market. Consequently, Socony-Vacuum Oil Co., Inc., the market leader in this territory, cut tankcar and tank-wagon prices at several points in the area two-tenths of a cent to a maximum of a cent and a half. The tank-wagon market was unaltered in metropolitan New York, Buffalo, Rochester, Syracuse, Boston, Worcester, and New Haven. Only Rochester and Buffalo were unaffected in Socony-Vacuum's territory so far as tankcar reductions are concerned.

The market situation in this territory now is that most of the gains made during the middle of June have been eliminated. The cent advance in Texas has been largely eliminated by Continental Oil Co.'s reduction, followed by others there last week.

The reductions in the New York-New England area and in Texas last week leaves the Kentucky, Rocky Mountain, and part of the Standard of Indiana territory at a higher market level than prevailed at the start of June, when Sinclair Refining Co. announced product prices must go up or crude prices come down. Until previously prevailing prices were posted in New York and New England and in Texas, the half-cent advance announced by Sinclair on June 14 was considered to be approximately 65 per cent effective. The drift into old marketing levels in the states reduced last week has taken at least 25 per cent off the previous estimate of effectiveness. Whether the remaining 40 per cent of the country on higher marketing ground will be sufficient to sustain the present crude market remains a question, and the answer will be given by the activity of the producing and refining branches during the next few weeks.

A Time for Caution

Several large companies report their gasoline inventories are in satisfactory position and that their commitments prohibit any material change in refinery operations for duration of the summer. On the other hand, there are a few whose gasoline stocks are in such shape as to argue against any resistance to downward price movements which might cause a temporary or permanent loss of volume.

Independent refiners and smaller integrated companies whose production exceeds demands of their sales organizations are struggling in a cross-current of influences. With exception of local territories in Louisiana, Texas, and, more generally, in Illinois, the crude market has remained stable since the latter part of 1938. Products produced from less expensive crude in Illinois and other areas where raw material is available at concession prices have been exerting constant pressure on general markets. In some cases the less expensive crude is in direct competition with products derived from posted-price raw material. In other cases refiners have found regular markets gradually closing to their products because of a more readily available supply. In turn, the products thus excluded have been forced to seek other outlets in competition with established supplies, and the only effective method of "cracking" a new territory is through the medium of price concessions.

Dislocation of the flow of supplies from the Mid-Continent to Chicago and other middle-western points of a substantial consumption by the more closely located new supply from Illinois has placed a more severe strain on the Gulf Coast and coastwise market. This dislocation of what was previously the normal flow of supplies has been a gradual process, and because it lacked the sensationalism of abruptness it has more or less slipped up on the industry.

Despite several discouraging signs now appearing in the petroleum markets, there are some who cling to the belief the current record rate of consumption points a way out for the industry. While a reduction of 156,400 bbl. per day in the rate of runs to stills appears a substantial figure on first glance, it actually means a curtailment of less than 5 per cent.

Opinion is uniform that prospects for a more satisfactory stock position with which to enter the winter months of low consumption would have a decidedly helpful influence on the market. Thus it appears that a reduction of 5 per cent in the refinery-operating rate of the industry would produce a variety of benefits. In the first place, the prospects of a decided slump at the end of summer could be converted to a potentially healthy last quarter of 1939 and first quarter of 1940. In the second place, the urge to reduce motor-fuel inventories in the hands of those least capable of carrying them through the slack consuming period would be eliminated. In the third place, the rate of increase consumption enjoyed so far this year and the improved outlook for the next three months, including July, is held sufficient in some

Nullifies Demand

By H. STANLEY NORMAN

The map at the right shows increased gasoline consumption by marketing areas. A further breakdown by states is shown in the table beneath the map

(Opposite page) The tail wags the dog in this World's Fair home which is built around the garage. The motor room is the only main entrance, thus indicating the importance of the motor car in today's living

quarters to bring a stiffer motor-fuel demand within a few weeks if the supply curve is pointed in the proper direction.

Consumption Favorable

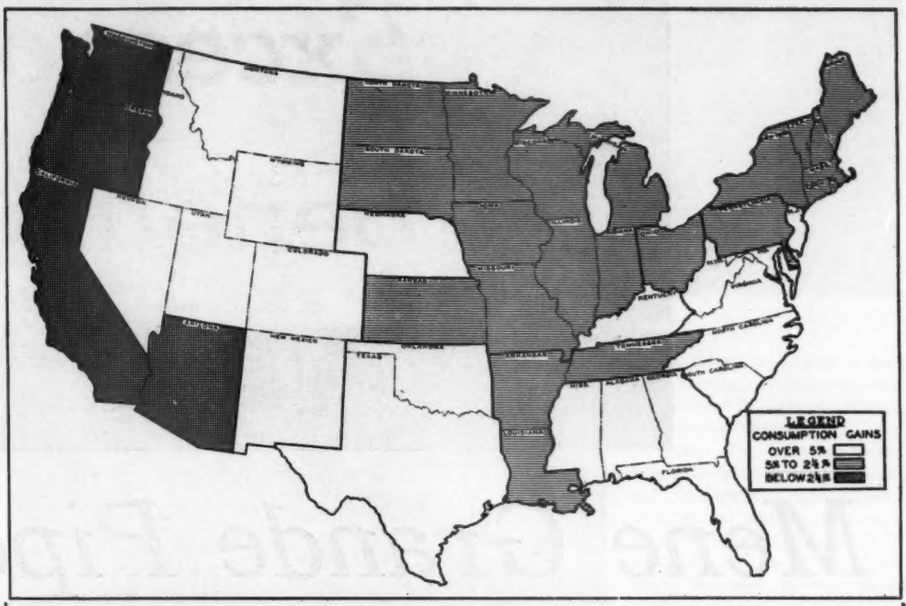
FORTY-FIVE states and the District of Columbia recorded increases in gasoline consumption ranging up to 23.8 per cent the first 4 months of this year over the same period last year. Three states—Arizona, Minnesota and North Dakota—reported small decreases. All reports are based on gasoline tax collections.

The largest gain was that of Nevada which continues last among the states in gasoline consumption. Completion of new highways and the increasing popularity of the state among winter and summer tourists, explains the large percentage gain in motor fuel consumption so far this year in Nevada. The state still has less than half the gasoline consumption of New Hampshire which ranks forty-seventh among the states in demand for gasoline.

Among the marketing areas shown in the accompanying map, the West Coast area consisting of four states shows the smallest gain and the southeastern states, the largest increase. Most of the southeastern states and those along the Atlantic seaboard have had more than average gains in gasoline consumption so far this year. Several of the middle western states including Ohio are below the average in percentage gain while most of the southwestern states are above the average. The figures are too early in the year to reflect the effect of the two world fairs on gasoline consumption. It has been assumed that California and New York and adjacent states will materially increase their gallonage in figures covering the summer months.

The 10 largest gasoline consuming states are California, New York, Pennsylvania, Texas, Illinois, Ohio, Michigan, New Jersey, Massachusetts and Indiana. Gasoline consumption in all of these states is establishing new records so far this year. The increases for the first 4 months range from 1.72 per cent in California to 6.52 per cent in Michigan. The volume increase of 19,496,000 gal. in Michigan for the 4-month period was only 1,000,000 gal. under New York which reported the largest gain of any state.

Collectively these 10 states have 56 per cent of the total gasoline consumption in the United States. Their total gain for the 4 months was 4 per cent which represented 53 per cent of the increase reported for the entire country.



GASOLINE CONSUMPTION BY STATES AND MARKETING AREAS, FIRST FOUR MONTHS (JAN. 1-APR. 30) OF 1939 AND 1938. (DATA IN GALLONS)

	1939	1938	1939 gain	Pct. gain
SOUTHEAST (STANDARD OIL CO. OF KENTUCKY)				
Alabama	75,718,000	72,113,000	3,605,000	4.99
Florida	135,354,000	127,526,000	7,828,000	6.13
Georgia	114,790,000	107,236,000	7,554,000	7.04
Kentucky	81,223,000	75,379,000	5,844,000	7.75
Mississippi	61,540,000	58,528,000	3,012,000	5.14
Total	468,625,000	440,782,000	27,843,000	6.31
WEST COAST (STANDARD OIL CO. OF CALIFORNIA)				
Arizona	33,406,000	33,408,000	*2,000	*.05
California	554,208,000	544,819,000	9,389,000	1.72
Oregon	67,406,000	62,951,000	4,455,000	7.07
Washington	99,866,000	95,810,000	4,056,000	4.23
Total	754,886,000	736,988,000	17,898,000	2.42
SOUTHWEST (MAGNOLIA PETROLEUM CO.)				
Oklahoma	125,018,000	118,056,000	6,962,000	5.89
Texas	414,778,000	395,186,000	19,592,000	4.95
Total	539,796,000	513,242,000	26,554,000	5.21
ROCKY MOUNTAINS (CONTINENTAL OIL CO.)				
Colorado	65,447,000	63,536,000	1,911,000	3.00
Idaho	24,784,000	23,812,000	972,000	4.08
Montana	31,712,000	29,789,000	1,923,000	6.45
Nevada	12,134,000	9,795,000	2,339,000	23.87
New Mexico	27,052,000	26,731,000	321,000	1.20
Utah	27,069,000	25,719,000	1,350,000	5.24
Wyoming	18,144,000	15,483,000	2,661,000	17.18
Total	206,342,000	194,865,000	11,477,000	5.88
NEW YORK AND NEW ENGLAND (STANDARD OIL CO. OF NEW YORK)				
Connecticut	93,720,000	91,733,000	1,987,000	2.16
Maine	34,434,000	34,221,000	213,000	.62
Massachusetts	198,287,000	188,982,000	9,305,000	4.92
New Hampshire	22,613,000	21,179,000	1,434,000	6.77
New York	521,468,000	500,530,000	20,938,000	4.18
Rhode Island	36,550,000	33,625,000	2,925,000	7.69
Vermont	16,217,000	15,611,000	606,000	3.88
Total	923,289,000	885,881,000	37,408,000	4.22
PENNSYLVANIA-DELAWARE (ATLANTIC REFINING CO.)				
Delaware	16,274,000	15,724,000	550,000	3.49
Pennsylvania	418,570,000	403,947,000	14,623,000	3.62
Total	434,844,000	419,671,000	15,173,000	3.61
ATLANTIC SEABOARD (STANDARD OIL CO. OF NEW JERSEY)				
District of Columbia	45,381,000	43,080,000	2,301,000	5.34
Maryland	83,599,000	80,470,000	3,129,000	3.88
New Jersey	247,711,000	241,054,000	6,657,000	2.76
North Carolina	132,641,000	121,924,000	10,717,000	8.78
South Carolina	67,197,000	61,787,000	5,410,000	8.75
Virginia	114,205,000	105,609,000	8,596,000	8.13
West Virginia	57,519,000	56,108,000	1,411,000	2.51
Total	748,253,000	710,032,000	38,221,000	5.38
MIDDLE WEST (STANDARD OIL CO. OF INDIANA)				
Illinois	397,752,000	381,332,000	16,420,000	4.30
Indiana	190,663,000	184,497,000	6,166,000	3.34
Iowa	155,339,000	150,606,000	4,733,000	3.14
Kansas	135,816,000	130,543,000	5,273,000	4.03
Michigan	318,430,000	298,934,000	19,496,000	6.52
Minnesota	140,542,000	143,860,000	*3,318,000	*2.30
Missouri	189,981,000	180,405,000	9,576,000	5.30
North Dakota	32,274,000	34,308,000	*2,034,000	*5.92
South Dakota	36,231,000	35,914,000	317,000	.88
Wisconsin	148,424,000	145,887,000	2,537,000	1.73
Total	1,745,452,000	1,686,286,000	59,166,000	3.50
CENTRAL SOUTH (STANDARD OIL CO. OF LOUISIANA)				
Arkansas	53,240,000	49,318,000	3,922,000	7.95
Louisiana	75,370,000	76,034,000	*664,000	*.87
Tennessee	91,339,000	88,316,000	3,023,000	3.42
Total	219,949,000	213,668,000	6,287,000	2.94
NEBRASKA (STANDARD OIL CO. OF NEBRASKA)				
Nebraska	68,144,000	64,798,000	3,346,000	5.16
OHIO (STANDARD OIL CO. OF OHIO)				
Ohio	395,586,000	381,253,000	14,333,000	3.75
Grand total	6,505,166,000	6,247,466,000	257,700,000	4.12

*Decrease.

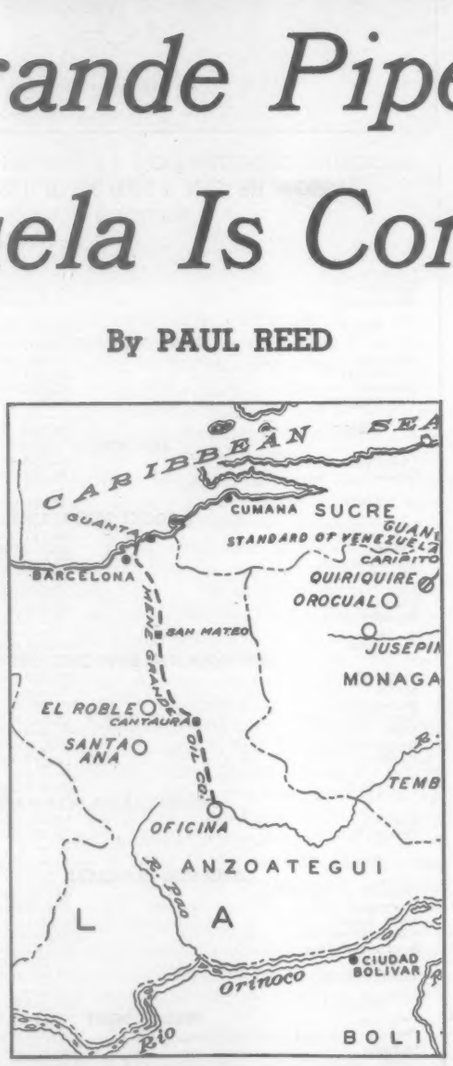
Mene Grande Pipe Line in Venezuela Is Completed

By PAUL REED

Construction of the Mene Grande Oil Co.'s 100-mile pipe line in eastern Venezuela was completed July 10, considerably in advance of contract requirements and will be ready for operation in the latter part of July. This line is not only one of the longest in South America but it is also the only long 16-in. line ever constructed for crude oil service. It will furnish an outlet for producing areas which have had no access to world markets.

The contract for the line was let to Williams Brothers Corp., Tulsa, and S. D. Bechtel Co., Los Angeles, Calif. Welding has been handled by H. C. Price Co., Bartlesville, Okla., as subcontractor. All other operations were directed by the contractor's own force. The building of the line has been supervised by David R. Williams, resident partner, and A. M. Garber, superintendent for the contractor. Phases of the work requiring attention at the Tulsa office have been handled by Guy S. Connors, vice president, Williams Brothers Corp. The entire construction program has been under the direction of Clark Elder, chief engineer, Mene Grande Oil Co.

The date of the letting of the contract was March 1, 1939. On March 31, men and equipment were on the job, having come by ship and airplane from the United States. According to the terms of the contract they were due there April 1. Camp was set up immediately and stringing of pipe started April 3. Laying operations were under way April 8. The contract called for completion within 120 working days. The construction crews are already leaving South America for the United States.



Operations started at Puerta la Cruz, near Guanta, Anzoategui, Venezuela. From this point the line goes south, crossing a break in the Caribbean range of the Andes Mountains; Oficina, at the receiving end of the line, is located in plains (llanos) country at an elevation of 1,000 ft.

The terrain traversed by the line may be divided into several sections, each of which has distinct characteristics. From the shore to the mountain country it is less than a mile in distance. Within 12 miles of the coast an elevation of nearly 500 feet is reached. The line is laid across 30 miles of granite and sandstone mountains which form three ridges with rocky valleys between them. The next 45 miles of the route is across very rolling wooded country in which sand and gravel is encountered. In the last 25 miles the line crosses grassy land which appears to be fairly level, although there is a gentle slope northward.

Building the line was expedited by the facilities furnished in the careful and extensive preparations made by Mene Grande Oil Co. before the arrival of the contractor's crews and equipment.

Top of page: Pipe strung along highway following pipe line right of way. This view affords a good idea of terrain encountered

Center: Map of route of Mene Grande line

Bottom: Many Venezuelans were employed for unskilled labor in building the pipe line

An adequate concrete material dock had been built at Guanta terminal; ships were berthed at the dock while unloading.

Ample provision had been made back of the dock for terminal storage of pipe. The pipe used is 16-in o.d. seamless, 62.579 and 67.658 lb., in 40-ft. joints. It was furnished by American and German mills. In hauling pipe seven joints were a truck load. Stringing of pipe was handled by 18 trucks. Mene Grande Oil Co. had built a highway along the entire length of the right of way, which was an important factor in accelerating pipe-line construction operations. Electric welding has been used in fabricating the line; the firing line method has been employed, with 7-joint sections welded on dollies in the conventional manner. All bends have been cold bends. The work was organized so that only one main line gang was used in laying the line.

After sections were tied in, a cleaning machine traveling along the line removed mill scale, rust and dirt, while the pipe was held in a raised position by tractor equipped with sideboom. After cleaning, the pipe was coated with enamel and wrapped with asbestos felt applied with a motor-driven machine.

As the work progressed, the stringing gang has been about 5 miles ahead of the firing line; the firing line has been 8 miles ahead of the ditching gang; the ditching gang about 3 miles ahead of the laying gang. Cleaning and priming, hot painting, and lowering-in operations have been carried on within a close distance of each other every day.

Practices followed are those customary in modern pipe-line construction. Extra heavy equipment was furnished for the job. Because of the situation of the new line, standards of inspection were unusually high.

The traffic department was charged with a responsibility which was vital for the success of the undertaking. Men, material and spare parts had to arrive at the right place at the right time. Machine shop facilities were provided for making repairs. In an undertaking of this kind in the tropics, camp organization is a subject which demands special attention because of its effect upon the efficiency of the personnel. Camps were lighted by electricity; each camp was provided with an ice plant, water supply, and hot and cold showers. Laundry was taken care of. Altogether, camps were as good as pipe-line camps can be made. The men have been well housed and well fed.

Climatic conditions were good and it was found that spring rains did not interfere materially with progress. There is an abundance of game in the areas traversed by the line but none of it could be shot because the carrying of firearms is forbidden by the Government. Contrary to the usual impression, the weather in this part of Venezuela is pleasant. Nights are cool and there is an afternoon breeze. Those going to the port at Guanta will find it a delightful place to live ,with the picturesque scenery to be found where mountains are near the sea coast. Guanta is the largest deep-sea loading terminal in Venezuela. When the grounds of the permanent terminal are landscaped it is believed this will be regarded as a choice spot in the foreign service of the owners.

Supervision of the work and skilled branches of pipe-line construction were carried on by a carefully selected group of Americans brought to Venezuela for the job. In this group were 76 men belonging to the contractor's organization; in addition to these, 24 were engaged in welding the line. Furthermore 200 Venezuelans were also employed. As soon as the Americans could pick up enough Spanish to tell them orally and by gesture what to do, the Venezuelans proved to be quite good at the manual labor connected with the work. In the course of time a lingo developed that might be called pipe-line Spanish.

Shipment of equipment was made without difficulty by sea. In March, 25 carloads of contractors' equipment was loaded at Baltimore, Md., on the 1,100-ton Norwegian motorship Herma. In addition, the ship carried 25 carloads of 16-in. pipe. In the shipload were boom tractors, tow tractors, backfillers, welding machines, welding rods, trucks, complete camp equipment, and groceries enough to last for nearly 2 months. Trucks in the shipment included 35 heavy-duty and 10 pickups.

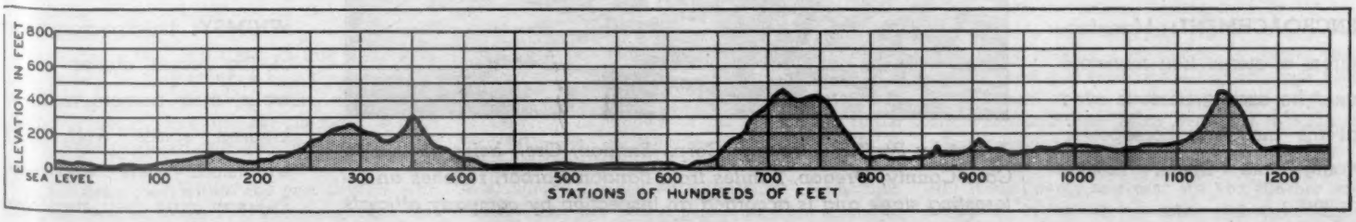
The Oficiana area which is to be served by the pipe line, has been developed as the result of exploration operations on large concessions owned by the company. By reworking and testing in 1937 it became established that the company had important oil showings in a number of wells drilled in a wildcat program commenced in previous years. In the last two years a number of additional wells have been drilled in the Oficina field and it is anticipated extensive activity will continue in this important area. Substantial investment is being made in the construction of a large camp at Oficina and a large tank farm. The field produces from several horizons. Early wells in the field were completed at depths of 5,660 and 5,995 ft. Crude from these wells is reported to have a gravity of 15° to 43° A.P.I. Although there is some low-gravity crude in the field, it is believed there is sufficient high-gravity crude to definitely establish this as the outstanding high-gravity field in Venezuela.

Right: As seen in this photograph, mountains rise abruptly near the shore at the marine terminal of line

Above: Tying-in a 7-joint section of 16-in. pipe

Right: Modern camp facilities suited to tropical conditions were provided for the crew

Below: Profile of mountains crossed by 30 miles of line near the coast



SPARKS . . . FROM THE NEWS

CHANGING TIMES: Last week three wells were completed in East Texas, with 26 tests drilling. A year ago 30 wells were completed and 106 wells were drilling.

STRAW IN THE WIND: The reduced initial output of new wells in Salem, Ill., field may have more long-range significance than the record production of the field and state last week.

RUMORS of Ickes' plans on oil die hard. The latest, that he will consolidate in one division all Interior Department activities touching petroleum, persists despite his flat denial.

LOCOED: New Mexico operators, seemingly locoed by recent successes in the new Loco Hills pool of Eddy County, brought in some good producers there last week and started six new tests.

EMPLOYMENT: Standard of New Jersey investment figures out at $15,269 for each of its 133,900 employes. Sidelight on the money needed to keep men employed.

FASCIST: Italy's real interest in its recent "liberation" of Albania may be shown in the fact that under a concession from the new government an Italian oil company has sunk 380 producing wells in Albania.

POWER: Gas industry is watching the Federal Power Commission, brought to full complement for first time in couple of years by seating of Leland Olds, a member of New York's American Labor Party.

ENCROACHMENT: Manufacturers of steam iron monsters must be casting anxious eyes at the mounting horsepower going into Diesel motive power.

CLOSING THE GAPS: Developments indicate that gaps between certain fields in North Texas and West Texas will eventually be closed.

ANOTHER BONE: Texas Panhandle producers were thrown a bone last week when they were permitted to produce 83,347 bbl. per day, a 20 per cent increase.

GAS BRIDGE: House of Representatives has passed a bill permitting Northern Natural Gas Co. to build a pipe-line bridge across the Missouri between Nebraska and Iowa.

EXTENSION: Just when they thought the working-over program in the old St. Louis field, Oklahoma, had about run its course the area was extended ¾ mile by a 1,600-bbl. producer.

STANDING HEAD: Oil news printers, to save time, can set this head and let it stand, "New pool opened in Kansas, several proven areas extended." It happens nearly every week.

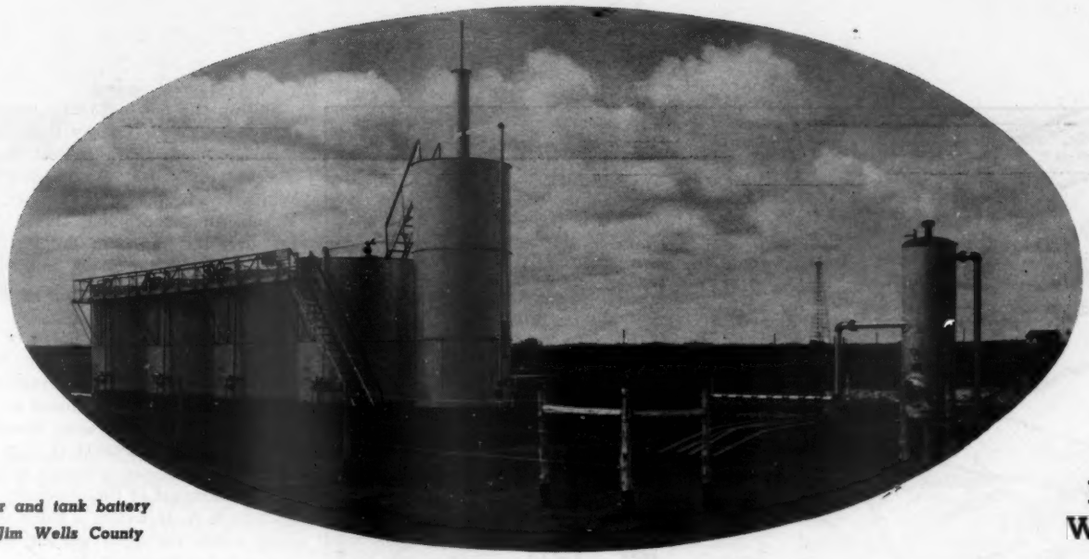
WHAT IS WHAT? Six thousand barrels of East Texas crude have been marked "illegal" according to a federal court ruling made this week. Yet, the oil was produced under a decision handed down by another federal body.

MINORITY CONTROL: One month ago Sinclair raised its tank-wagon gasoline prices a half cent. Most others fell into line, but a handful of holdouts wrecked the movement and a real opportunity was lost.

WHIMSY: Judging from some of the recent names of oil wells, their namers must be kindred spirits with those whimsical souls who give Pullman cars their monikers.

WILDCAT IN REMOTE AREA . . .

A test by Pacific Petroleum Corp., Bandon, Ore., being drilled in Coos County, Oregon, 2 miles from Bandon Harbor, reaches an interesting stage and is accorded an inspection by company officials



Typical separator and tank battery installation in Jim Wells County

By NEIL WILLIAMS

New Fields, Sands, Extensions Around Jim Wells County

HOUSTON, Tex., July 10.—Centering in and immediately around Jim Wells County, lower Texas Gulf Coast district, a development play is proving a rapid succession of new fields, and new sands and extensions in existing fields. Within a radius of 30 to 35 miles of Alice, county seat and approximate geographical center of Jim Wells County, 14 fields have been opened this year. These do not include several new producing areas, now regarded as possible extensions of other fields, which may prove to be separate pools.

Fields opened within this area constitute the bulk of discoveries this year for the entire lower Gulf Coast district and remainder of Southwest Texas. Outside the area, 10 fields have been opened. Two are in Refugio County, within a hundred miles of the center of Jim Wells County. The others are small, shallow pools in the Laredo area and along the fault line. At a number of other places first oil production has been proved this year, although these fields had been indicated by gas or distillate wells.

Of the 14 fields opened within the 30-mile radius of Alice, seven are within Jim Wells County, the others being around the border in adjacent counties, including Nueces, San Patricio, Live Oak and Duval. This represents one of the most concentrated development plays experienced in South Texas. Even with such a list of new fields, no immediate letup is in sight. Various wildcats now drilling have encountered sufficient showings of oil or gas to indicate additional fields.

Of particular interest is the fact that 11 of the 14 fields have been opened within 3 months. In the past month there have been added five new fields, with three each for May and April. The remaining three included one in March and two in February.

These bring the total fields in this area to approximately 50, depending on how they are classified and grouped. Jim Wells County alone has 16 fields. Although this number includes several which have produced only gas, they are regarded as potential oil fields.

It has been only within the past 2 years with the play directed to the Frio-Vicksburg trend that there has been any concerted efforts to exploit Jim Wells County. Prior production in the county was small, being limited to a comparatively few fields, and only scattered exploration had been undertaken.

Discovery of Frio-Vicksburg production at East Premont, southwestern Jim Wells County, brought first general recognition to the potentialities in this county. The discovery well, drilled by Magnolia Petroleum Co. late in 1937, was the incentive for additional exploration, leading to opening of the Alice field early in 1938. Subsequent development at Alice has proved this field to be of major extent, occasioning an active drilling play all along the trend.

Alice Field

So far Alice is the most important field in Jim Wells County, the only one in which any general development has been undertaken. Taking in the different areas, the field now is about 4 miles across each way with different producing sands. Although there is some unproved acreage between several of these pools or areas and the original field, making it possible they may be separate pools, the similarity of sands and conditions indicates they comprise one large field. Drilling is now under way to link them.

Newest of these pools or extension areas is that opened in February by Gravis & Doran No. 1 Francis Clark, completed as a distillate producer perforated in sand at 4,805-14 ft. It is a little over a mile south of the East Alice area. It was drilled to the main producing horizons around 5,200-5,300 ft., in which it tested salt water. Since then the operators have completed an oil producer from the deeper sand at 5,326-30 ft. about a mile south. Drilling now started between these wells and the other Alice areas will determine whether they are an extension or another field.

Three and a half miles farther south of Gravis & Doran wells, known as the Clark area, is the new Magnolia City field, opened in April by F. A. Gillespie & Sons No. 1 Shear, Section 209, A.B. &M. Survey. Drilled on a "farmout" from Shell Oil Co., Inc., this well is producing from a sand in which casing was perforated at 5,439-46 ft. As there has been no drilling between this well, so far the only one, and the Clark area, there is a possibility it may be linked with the latter.

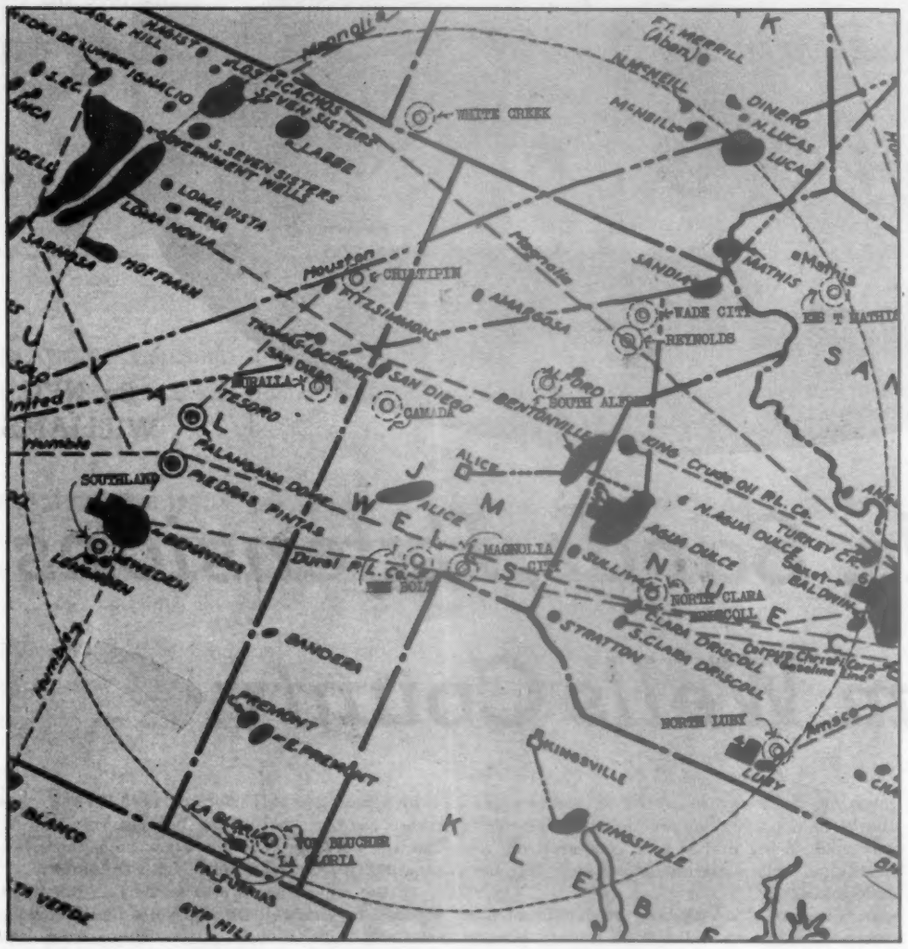
In the same general area is the Ben Bolt field, opened by Bridwell Oil Co. No. 1 Smith flowing 150 bbl. daily through a ⅛-in. choke from sand perforated at 5,242½-46½ ft. Already both east and north offsets have been completed, and a fourth test is under way. It has an unusually thick sand section for that district. This field is about 1½ miles southwest of the town of Ben Bolt, only a few miles southwest of the Magnolia City pool and a similar distance south of the Alice field.

So far development in most of the new fields has not been sufficient to determine their extent or importance. Several are of limited area and potentiality but it is possible at least some may prove of sizable proportions.

The most recent new field is Reynolds, northeastern Jim Wells County, where the discovery well, drilled by Texas Gulf Producing Co., No. 1 E. E. Miller, Benito Lopez de Jaen Survey, flowed some 37.6-gravity oil with considerable gas. It is northeast of the Alfred townsite and about 3 miles northeast of the Alfred field. Sand has been identified as basal Frio. The hole was drilled to 5,617 ft. and plugged back to 5,200 ft. Two additional tests have been started, a west offset by Graham & Mosser, and an east offset by Morgan and associates.

Southwest of the Alfred field, a 1938 discovery in which only small production has been developed, is South Alfred or West Alfred, opened in April by Ike Howeth No. 1 Adams, producing from a 4,600-ft. horizon, flowing initially 135 bbl. through a ⅛-in. choke with 825 lb. pressure on the tubing, making a good well. A second well, equally good, has been completed, although 1,250 ft. southeast of the discovery, another test got salt water and after being deepened to 5,774 ft. was abandoned.

The other definitely established new fields in Jim Wells County this year are Von Blucher and La Gloria, in the extreme south end, and Camada



Fourteen fields opened within 30-35-mile radius

(Springfield), in the west central portion, about 9 miles west and a little north of Alice. The Von Blucher discovery, drilled by Shell Oil Co., Inc., is about 2 miles northeast of La Gloria. It flowed initially about 28 bbl. of 53-gravity with considerable gas through casing perforations at 7,555-60 ft. A second test, 1,865 ft. east of the discovery, has been abandoned after drilling to 8,004 ft., which has created some question of the importance of the area although there is nothing to prevent development in other directions.

Adjoining the townsite of La Gloria, La Gloria field, opened by Magnolia Petroleum Co., is only 2 miles from Von Blucher. The discovery well, so far the only test completed, is a distillate producer, flowing initially at the rate of about 165 bbl. of 60-gravity distillate and 5,250,000 ft. of gas daily through a $\frac{7}{8}$-in. choke with casing perforated at 6,560-70 ft., approximately 1,000 ft. shallower than the Von Blucher well. A second test is drilling.

The Camada field, opened in May, also has only one well, Parr Drilling Co. No. 1 Hoffman, in the southeast corner of the reserved townsite of Springfield. This well flowed initially 5.7 bbl. of 45-gravity oil an hour through a $\frac{1}{8}$-in. choke with perforations in casing at 5,625-40 ft. A second test, about 2,500 ft. northwest, got salt water in this sand, reported as Jackson, and drilled to a total depth of 7,041 ft. It encountered showings in a 5,800-ft. sand and also in a 6,850-ft. sand (Yegua), in which it also tested salt water. Another test, 5,800 ft. northeast of the discovery, is being drilled by Tom Graham Oil Co. on a Magnolia Petroleum Co. farmout.

Another field in Jim Wells County is in the making in the Wade City area, several miles northeast of the new Reynolds field, and 3 miles northwest of Orange Grove. There J. R. Hunter and W. R. Quinn have been testing a gas sand at 4,738-45 ft., after plugging back from a total depth of 5,411 ft. in their No. 1 Pundt.

Indications of a new field have been given in Random Oil Co. No. 1 San Antonio Joint Stock Land Bank, west of the Sandia field and about 7 miles northwest of Orange Grove. This well tried to blow out while drilling around 6,000 ft. South of the old Armagosa gas field, northwestern Jim Wells County, and about 10 miles northwest of Alice in the northwestern part of the county, some oil production was obtained in a wildcat drilled by Texas Gulf Producing Co. The sand, in which casing was perforated at 6,485-6,530 ft., is in the Yegua. The well is shut down after flowing about 2 bbl. of fluid, 30 per cent oil, 70 per cent water.

Within the 30- to 35-mile radius of Alice outside of Jim Wells County fields opened this year include: North Clara Driscoll and North Luby, Nueces County; East Mathis, San Patricio County; White Creek, Live Oak County; and Chiltipin, Muralla and Southland, Duval County. All are just over the line from Jim Wells County. North Clara Driscoll and North Luby have been most promising, although in these setbacks have been experienced.

North Clara Driscoll, north of the Clara Driscoll field, south of Robstown, was opened the past month by Texas Conservative Oil Co. No. 1 Minnie Bock, which produced at the rate of 100 bbl. daily through a $\frac{1}{2}$-in. choke with perforations in sand at 3,806-14 ft. The same company since has completed a second well, No. 1-B Bock, 815 ft. northeast of the discovery well, with sand at 3,808-36 ft. However, a third test by this company, a mile northeast, got salt water in the sand and is being deepened. Three other tests, one by Buchanan Production Co., another by Reed & Cox and the third by Texas Conservative, have been started, representing the most drilling activity in any of the new fields.

At North Clara Driscoll, operators are looking to deeper sands, present in the original Clara Driscoll field, to provide prolific production. Deeper drilling is under way in two tests. Interest also is attracted to the probability of extending the play northward through Robstown into northern Nueces County.

North Luby

The new North Luby field, opened the past month, is north of the Luby field in southern Nueces County. It is possible the discovery well, Seaboard Oil Co. No. 1 LaPrelle, is a major extension of the Luby field proper, but present opinion is it is a separate pool. The well is producing from a 4,350-ft. horizon, at approximately the same level as at Luby.

East Mathis, in San Patricio County, another new field, is about 7 miles east of Mathis. It so far has only one well, drilled by Seaboard Oil Corp. and completed in May in a 5,250-ft. sand making 120 bbl. daily. The Chiltipin field, northeast of the Fitzsimmons field, Duval County, was opened the past month by William Nichols No. 1 Graham, completed for dry gas in a 4,800-ft. sand. This well, the only one for the field, is being worked over for a possible oil well. Only one small oil well, J. B. Blanchard No. 1 Parr, has been completed in the Muralla field, west of San Diego, completed in May at 4,715 ft. The new Southland field, opened in April by Hiawatha Oil Co. is southwest of the Benavides field. The discovery well flowed initially 145 bbl. daily on a 5/32-in. choke at 5,298 ft. The White Creek field, southwestern Live Oak County, opened in February, has one small pumper, Holland & Smith No. 1 Bonham, producing from 1,397 ft. Several dry holes have been drilled in the area.

California Grand Jury Takes Recess

LOS ANGELES, Calif., July 10.—After 5 weeks' investigation, the special federal oil grand jury inquiring into asserted monopolistic practices by Pacific Coast oil companies recessed July 7 until July 25, when more important phases of asserted price-fixing will be aired.

Coincident with the 3-week adjournment is the departure from Los Angeles of Joseph E. Brill, special assistant to Attorney General Murphy, for Washington to confer with associates on the local investigation and other matters.

Since impanelment of the special grand jury before U. S. District Judge Paul J. McCormick, 40 executives and employes of major and independent oil companies have testified. In addition, a mass of records of oil companies and associations has been subpoenaed and correlated in an effort to obtain evidence to support the Government's position.

Assisting Mr. Brill in the investigation, which will be enlarged following the recess, are M. S. Huberman and Henry McClernan of the Department of Justice.

The present investigation follows 2 years of preliminary work by the Department of Justice attorneys and accountants following receipt of complaints that the Pacific Coast oil companies had violated the Sherman antitrust law.

New Pressure Maintenance and Refining Units in Illinois

By HARRY F. SIMONS

RISING production in Illinois is causing expansion of pressure maintenance plants and refinery capacity as well as an unusual amount of pipe-line activity, according to recent announcements.

The Carter Oil Co. recently disclosed that it was preparing to expand its facilities for pressure maintenance in the Louden field, Fayette County. A forerunner was the completion of 11 gas input wells and the announcement of the drilling of five more. Last week four such completions were registered, and another input well was started.

The present plant is located in Section 15-8n-3e, while the new one will be erected 3½ miles south in Section 33-8n-3e. The plant in Section 15 consists of four 300-hp. angle type, 3-stage compressors in one building, and a 6-cylinder, 300-hp., 400-r.p.m. internal combustion engine, direct connected to a 200-kw. a.c. generator in an auxiliary building. The generating unit furnishes current for the plant and for the operation of individual electrically driven pumping units. Size of the pumping units varies from 3.5 to 7-hp. Two of the angle-type compressors were recently added, the original installation being only two units. The capacity of the plant is about 3,000,000 cu. ft. daily although it has never reached peak load.

The new plant will consist of two main buildings, one to house the compressor units and the other the electrical generating machinery. There will be six compressors at the new station.

The Louden field covers approximately 20,000 acres and, under the contemplated spacing method, will call for the drilling of over 100 input wells on Carter properties. Each input well will have a capacity of about 60,000 cu. ft. of gas daily. The present plant in Section 15 could make an estimated 600 gal. of gasoline daily but operators would rather have it replaced in the formation than they would to market it. All possible residue and all of the higher fractions are being returned to the pay zones.

Discovery of three producing sands in the Louden field has led to an unusual practice in repressuring with one input well being used to maintain the pressure in two zones and one producing well being used on each location for obtaining the oil. The zones are separated by a packer in the input wells but are not separated in the producing wells. Manipulation of the well regulates the flow of gas. The third zone, the Paint Creek stray, is not continuous throughout the field and there is some question as to the feasibility of repressuring it.

Texas Co. has a large repressure plant located on the north shore of Lake Centralia in the Salem field. That company originally planned on repressuring the Benoist sand but since installation of the plant good production has been discovered in the Aux Vases over most of the field and also in the McClosky. To date no effort has been made to repressure the latter formation anywhere in Illinois. The Aux Vases is similar to the Benoist, being, if anything, a truer sand and it will probably be as suitable for repressuring as the Benoist.

Repressuring work in the Salem field has been hampered by the necessity of Texas Co.'s drilling a large number of forced offsets and the production department is very busy keeping abreast of the necessary work. The tendency of many operators of small leases to produce their properties to capacity has in some instances hindered the repressure work.

The Texas Co. plant is very similar to the one at Louden, being a compression plant which automatically recovers a considerable quantity of gasoline, mostly during the second compression stage. After stabilization the gasoline is carried by pipe line to the Texas Co. loading rack at Salem where it is shipped to the refinery at Lawrenceville of the Indian Refining Co., a Texas Co. subsidiary, for blending.

A 16-in. gathering line enters the plant from the north and a 14-in. enters from the south; 6- and 8-in. laterals are used with 3-in. lines leading from the separators on each lease. Separators are elevated to provide a vacuum on the gathering system.

Oil-gas ratio for the Benoist and the Aux Vases is about 1 bbl. oil to 450 cu. ft. of gas. Present production in Salem is over 120,000 bbl. daily, although a considerable part of this amount is coming from the McClosky lime. The gas is reported to be richer than that in the Louden field, which averages about 2.5 gal. per 1,000 cu. ft. of gas. Six tanks are used for stabilizing the gasoline before shipment.

Several new refinery projects have been announced recently with one of them nearing completion. It is the Ray Hose interests plant at Pana, Ill., which was scheduled to go on stream July 10. The plant was purchased from the Solvex Refineries, Inc., and the plant dismantled at Gladewater, Tex., and moved to Pana. A cracking unit was added.

Chase Savage, Evanston, Ill., recently announced starting of construction on a 1,000-bbl. refinery a mile south of Pana. Estimated cost of the plant is $250,000. Wabash Refining Co. recently received permission for the erection of a refinery on the Baltimore & Ohio right of way near Sandoval, Ill. The plant will have 750 bbl. capacity.

A refinery reported as having 3,000 bbl. capacity is being erected on the banks of the Mississippi, south of St. Louis, Mo., by R. G. Mathews, formerly of the Centralia Refining Co., Centralia, Ill. Mid-States Refining Co. is now operating the plant at Joliet, Ill., formerly known as the Henry H. Cross refinery. The Hertzog Refining Co. is erecting a 1,500-bbl. refinery at Evansville, Ind., which will probably operate on crude from the Griffin, Ind., area. This brings the total to 11 new plants that have started operation since the discovery of the Illinois basin.

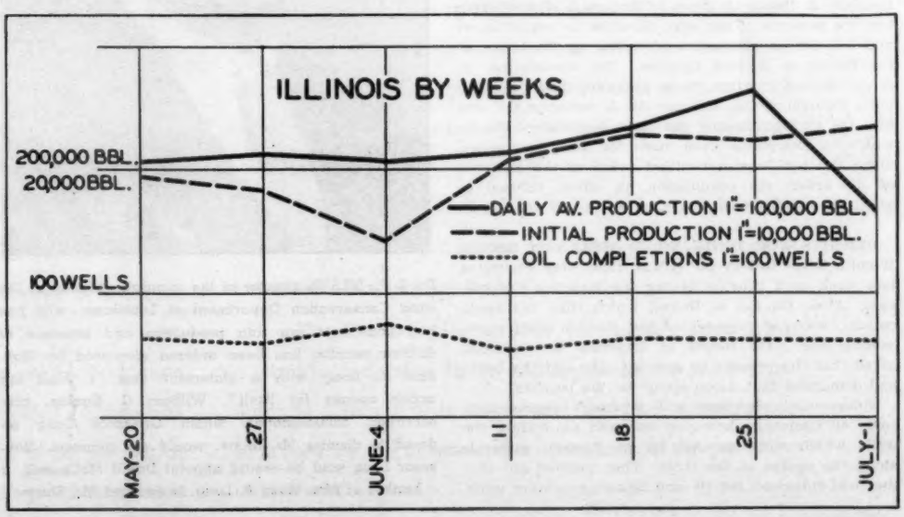
Major companies are also enlarging their facilities, the Socony-Vacuum Co. (Lubrite division) plant at East St. Louis now being in the process of an extensive overhauling, Shell Oil Co., Inc., has already let contracts for a combination cracking and coking unit at its Wood River plant. The Standard Oil Co. of Ohio recently announced expansion of its Cincinnati, Ohio, terminal, and the Ohio Oil Co. is enlarging its plant at Robinson, Ill.

Pipe Line Work

Work on the new pipe-line projects, which will give the basin fields approximately 115,000 bbl. of new pipe-line outlets, is progressing rapidly.

Many of the independents will continue to ship their production to refiners by rail. Rates to representative destinations from Centralia, Ill., are as follows:

Destination—	Rate/100 lb. (cents)
St. Louis	6.5
Chicago	11
Cleveland	18
Buffalo, N. Y.	22
Clarendon, Pa.	22



TEXAS

THE FEDERAL TENDER BOARD at Kilgore, last Saturday announced its decision denying approval of a July forecast tender of 5,060 bbl. of oil produced by Rowan & Nichols Oil Co. on its Todd "B" lease near Gladewater in the East Texas field. The company had sought federal tender to move oil produced from five wells on this lease under a federal court order which raised the daily allowable of these five wells from 112 to 220 bbl. Movement of the oil had been sanctioned by the state Tender Board. Chairman J. W. Steele, in reading the board's decision, said attorneys for the company had informed the board they would instigate litigation against the federal board's decision in Judge R. Bryant's federal court at Sherman. The board's decision read:

"The board finds that Rule 23 of the special Railroad Commission order of June 19 did not exclude wells of the applicant, inasmuch as the order reads: 'Owner or operator or manager of each well in the East Texas field shall be permitted, either collectively or individually, to produce daily from each well a maximum of 2.32 per cent of the hourly potential capacity as determined by the commission.'

"That that part of Rule 23 of said order, which states: 'The above order shall not be enforced as to property of Rowan & Nichols Oil Co. . . .' does not constitute exception to the allocation covering each well in the field on a potential basis.

"That said provision in no wise changes the order as written but merely suspends or holds in abeyance enforcement of the order as applied to Rowan & Nichols.

"That the order of the U. S. District Court at Austin does not show on its face that it applies to Federal Tender Board No. 1, and that the board further finds that the constituent part of the 5,060 bbl. of petroleum covered by the tender application is or would be contraband within meaning of the Connally Act.'

Rowan & Nichols Oil Co. Tuesday filed suit in Federal District Court to enjoin the Federal Tender Board from interfering with the company's right to produce oil under special permission of the Federal Court order issued at Austin. The suit names Jack W. Steele, chairman of the tender board; E. W. Chatterton, a member; Tidal Pipe Line Co., and Texas-Empire Pipe Line Co., both of Tyler, as defendants.

FIRST PETITIONS FROM INDEPENDENTS asking for revision of East Texas well allowables under the Rowan & Nichols decision, meanwhile, were received by the commission at Austin. Petitions of the new applicants, which were Selby Oil & Gas Co. of Gladewater and Westheimer & Neustadt of Kilgore, did not include the detailed information contained in those of the major oil companies. Some observers felt that possibly the two independents were merely protecting themselves against possible lawsuits which might be filed against them by royalty owners.

Since the Railroad Commission has declared it does not intend to modify the East Texas proration order in any respect pending a final decision from the U. S. Supreme Court, operators desiring to bring their allowables in line with those of Rowan & Nichols have but one recourse: They may file suits in federal court and ask for an injunction according to the terms of the Rowan & Nichols decision. The commission, in effect, denied the first three petitions filed (by Magnolia Petroleum Co., Humble Oil & Refining Co. and Sun Oil Co.) by issuing the July proration order in which no exceptions were made for these companies. Since the petitions were filed prior to the issuance of the order, the commission, in effect, refused to grant the applications.

PERMITS FOR DRILLING 39 WELLS in the big Wichita River bed in the K.M.A. field were requested last week at a hearing before the Railroad Commission. Aloco Oil Co. of Dallas, which filed the applications, was not represented but Gaddis Bass, representing the state Board of Minerals Development, asked that the permits be granted. He said the board had demanded that Aloco apply for the permits.

Numerous landowners and attorneys representing some 40 operators, however, objected to drilling the wells which were applied for at 1,000-ft. intervals along the course of the river. They pointed out that the field rules call for 10- and 20-acre proration units, and that drilling has proceeded on that basis. They further pointed out that the proration plan based on acreage and per-well would be advantageous to Aloco because of the density of drilling proposed, estimated at a maximum of one well to four and one-half acres.

CHAIRMAN LON A. SMITH of the Texas Railroad Commission Wednesday denounced fears that crude oil production in East Texas may be thrown into a chaotic condition by a federal court ruling granting Rowan & Nichols Oil Co. a larger allowable.

"The ruling of the lower court affected only five East Texas wells," Mr. Smith said. "Even in that case the Federal Tender Board has not as yet permitted the transportation of oil in excess of the allowable set by the commission.

"While, under this ruling, several East Texas operators have asked additional allowables, none has been granted. The commission was a unit in its refusal of such applications. It will grant none until and unless the highest federal tribunal in the nation commands it. We feel that our allowables in East Texas are legal and fair. We have no intention of voluntarily making any changes. We assure oil investors and those dependent upon the industry that the full weight of the commission will continue to be thrown behind stability and we are confident that the courts will sustain our position.

"Numerous inquiries have been made to me concerning this situation and I am anxious to inform the public that the oil industry now is stable and will continue so, if within the power of the Texas Railroad Commission. We have found public opinion with us in an effort to maintain stability."

ROWAN & NICHOLS CASE was brought on June 10 into a hearing on a West Texas field, the Foster field in Ector County.

Mark McGee, attorney for the Indian Territory Illuminating Oil Co., which has asked a change in the method of dividing the allowable in the field, told the Railroad Commission he considered the opinion required the commission to make acreage a part of the proration formula in any field. The Foster area is prorated on straight potential.

Other attorneys at the hearing excepted to McGee's statement. It was the first time that the opinion has been used as a reason for changing orders in other fields outside of East Texas.

STATE CAPITALS

Dr. J. A. SHAW, director of the minerals division of the state Conservation Department of Louisiana, who has had control of pro rata production and issuance of drilling permits, has been ordered dismissed by Gov. Earl K. Long with a statement that "I think my action speaks for itself." William C. Rankin, conservation commissioner, whom Governor Long ordered to dismiss Mr. Shaw, would not comment. Governor Long said he would appoint David McConnell, a brother of Mrs. Huey P. Long, to succeed Mr. Shaw.

CALIFORNIA

THE ADVENT OF THE SEASON of peak consumption finds California crude oil production practically under control; consequently stocks of crude and refined oil are expected to be reduced until possibly the end of September. The first reduction took place in May when a reduction of 745,470 bbl. was effected and present indications point to a continuance of this practice for another several months. It is quite obvious that this is a very healthy condition as it will enable marketers to store again next winter if necessity demands. Profits of refiners and marketers have been adversely affected during the past year due to the necessity of storing large amounts of crude and refined oil incident to the chronic overproduction situation that started late in 1937. The new uniform method of allotment with the establishment of a 15-bbl. minimum for shallow wells has simplified administrative work and enhanced curtailment of production. The federal grand jury has recessed for a short period and consequently any action along this line will be postponed. Opinion with respect to the Atkinson control bill remains divided as some believe it will be upheld if submitted to a referendum.

KANSAS

THE KANSAS CORPORATION COMMISSION has been temporarily restrained from enforcing its allocation order for the Lorraine pool of Ellsworth County, through Judge Roy A. Smith upholding the complaint of Winkler-Koch Engineering Co. and Courtney B. Davis, both of Wichita, that the allowable order created underground and economic waste. The daily flow had been cut from 25 to 15 bbl. a day.

Bradley Oil Co. also joined in the application for the injunction. An appeal is to be taken.

MISSISSIPPI

"INTERESTS WITH 6,000,000 ACRES of land under lease for mineral rights have prevented Mississippi from becoming an oil state," Lester Franklin said in an address at the courthouse at Rolling Fork, Miss.

"They will either develop it or abandon it when I am elected governor," he said. "I favor a graduated tax on all leases and royalties which will induce development or abandonment of gas oil and mineral lands now being held without development throughout the State of Mississippi.

"If they won't bring the oil in which state geologists say is here, then we will take this tax from the leases and go out and drill on the remainder of the 25,000,000 acres of state lands," Mr. Franklin declared.

The OIL AND GAS JOURNAL

PRODUCING REFINING NATURAL GASOLINE PIPE LINE

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Close The Door

The oil business is now in the midst of the greatest gasoline consumption period in its history. So far as domestic demand is concerned it is certain to continue to a peak level over the next 7 or 8 weeks.

It should be apparent to anyone familiar with the current state of the industry that it has failed so far to take advantage of this period to place the industry in a sound operating condition over the remainder of 1939.

The immediate cause of the present unsatisfactory conditions in the face of record demand for gasoline and several other products lies in the operations of refineries.

For example, crude runs to stills in domestic refineries last month were around 3,500,000 bbl. daily, an increase of 350,000 bbl. over June of last year.

It is clear that the 5 per cent increase in demand for gasoline could not by any process of reasoning afford justification of an 11 or 12 per cent gain in refinery crude runs to stills.

The result was that gasoline stocks were reduced only 3,000,000 bbl. and the month closed with stocks on hand practically the same as last year. Motor fuel inventories are now higher than they were a year ago.

Operations should have been conducted so that inventories of gasoline during June would have been reduced by at least six million barrels. As a consequence of this failure the industry has had no benefit from the large increase in domestic demand for its principal product.

Conditions in wholesale and retail prices are particularly unsatisfactory. A general increase of at least 1 cent per gallon in gasoline is needed.

Nor has gasoline been the only product that has suffered from these overextended operations. There has been a too rapid increase in the stocks of all grades of fuel oil in the recent weeks with the danger that refiners will enter the fall season with greater inventories than there is any possible justification for in expected consumption.

The same situation applies to practically all the other principal refinery products. Demand has been satisfactory and will continue to be but there are too many suppliers trying to get rid of excess material.

All this has meant that efforts to improve the industry's earning situation by getting better prices for motor fuel and other products have not been generally successful.

The present plight of the industry cannot be blamed upon the operations of the smaller refineries as often has been the case in the past.

Crude runs to stills in the Mid-Continent area, the home of the small refiner, are actually less than they were a year ago. There has been no general increase in the Appalachian region where a number of small refineries are operated. Refinery operations in the Rocky Mountain states are substantially under a year ago.

The largest increases, in fact, have been in the Gulf Coast, Atlantic seaboard and Midwest areas, the home of most of the large refineries east of the west coast.

When faced with a similar situation last year, refiners, as a group, placed their operations on a much sounder basis, contributing materially to an improved statistical situation.

It is unfortunate that the industry has to close the door after so much damage has been done but that is better than not closing it at all.

There is no question that the industry must make a sizable reduction in its plant operations in the immediate future if it is to prevent the dire consequence indicated by the unwarranted operations of the past several weeks.

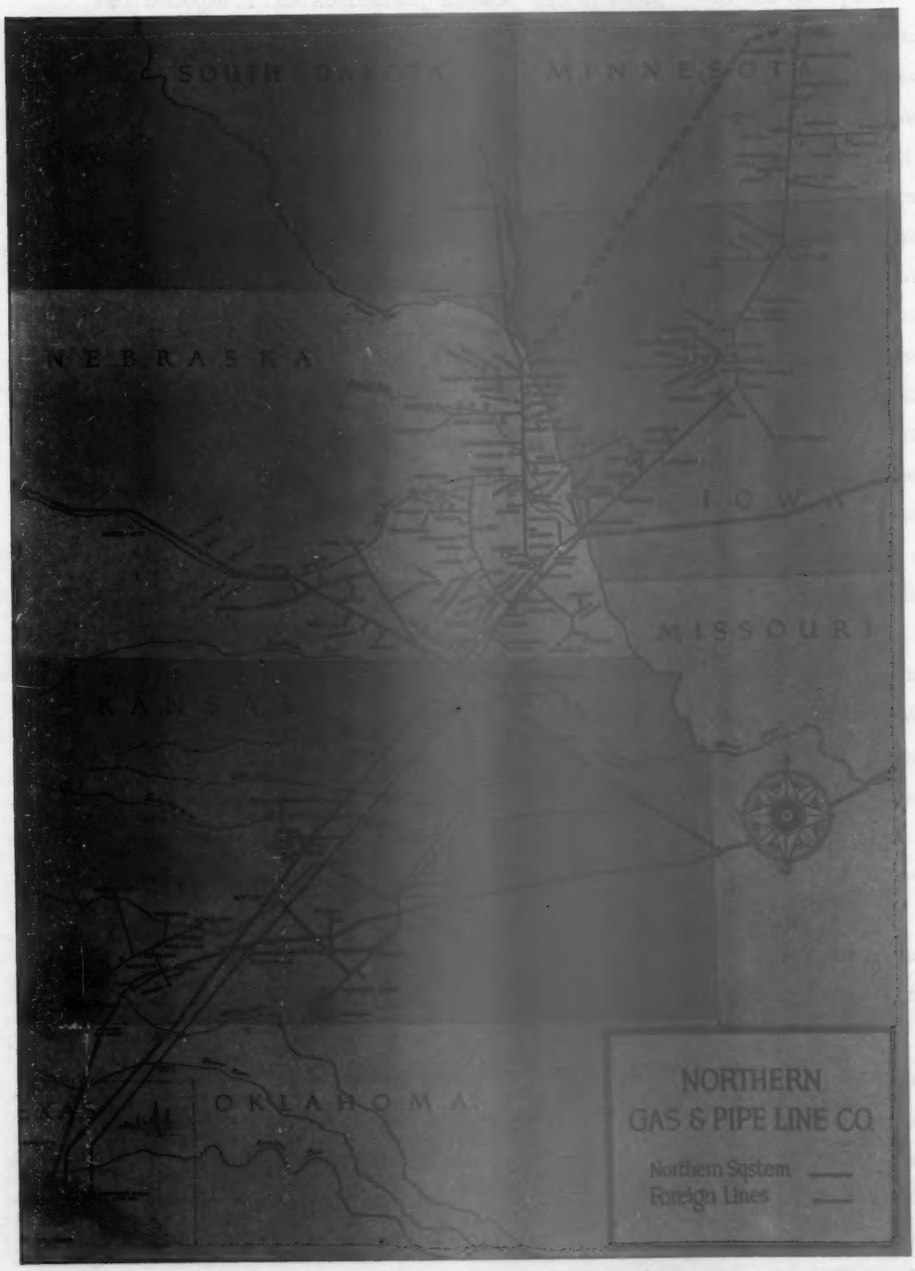
Northern Natural Planning 240-Mile 16-in. Line

WASHINGTON, D. C., July 10.—The Securities and Exchange Commission announces that Northern Natural Gas Co. in a declaration filed regarding a proposed issue of bonds and loans, proposes to use $3,600,000 of the bank loans for construction of about 240 miles of 16-in. transmission line from Sioux City, Iowa, to a point near Minneapolis, Minn., and $1,200,000 for compressor station property, lateral pipe lines of various sizes, distribution property and subsidiaries and development.

Northern Natural Gas Co. operates 2,451 miles of 2 to 26-in. lines. Its main line runs from the Texas Panhandle field, connecting with Lincoln, Nebr., and Council Bluffs, Iowa, and on to Minneapolis. A branch runs from Lincoln to Sioux City, Iowa, and Sioux Falls, S. D., and one to Des Moines, Iowa, Another branch goes to Rochester.

Early this year when Kansas Pipe Line & Gas Co. filed application with the Federal Power Commission to construct a line from the Hugoton, Kans., field to the Mesabi iron range from northern Minnesota, Northern Natural and Montana-Dakota Utilities Co. contended that area was their natural market and should be supplied by them, if at all. Northern Natural asked the Federal Power Commission to delineate the area in Minnesota which should be served by it and last October the commission ordered Northern Natural to show cause why it should not be ordered to extend its facilities in the area through construction of approximately 1,000 miles of lines northeastward from its present terminal. North Dakota Consumers Gas Co. and Public Service Gas Co. of Montana also intervened. Since then the matter has been before the Federal Power Commission and the Securities and Exchange Commission.

It is understood Northern Natural is prepared to proceed with construction of the line from Sioux City to Minneapolis as soon as the loan is authorized by the S.E.C. and that it will be completed probably before the end of the year.



Dotted line marks proposed extension from Sioux City to Minneapolis. Northern Gas & Pipe Line Co. is the operating subsidiary of Northern Natural Gas Co.

League City Operators Form Unique Organization

HOUSTON, Tex. — The principal operators of the League City pool, Phillips Petroleum Co., Midstates Oil Co., George F. Echols Co., and Salt Dome Oil Co., are forming an operators' committee which will employ a competent engineer to have charge of the pool. This step has been taken to insure modern and scientific methods of development, operation and conservation in this deep Frio sand production in Galveston County, Texas.

The League City Operators' Committee is a unique organization in that two of the largest royalty owners in this pool are joining in the agreement and will have representatives on the committee. This recognition of the rights of royalty owners is an unusual feature that will be watched closely by other operators.

The pool is receiving an outlet for its crude by a line which will extend from the field to a junction that will connect it with the main systems of the Gulf Coast area.

Government Seeks Royalties On Kettleman Hills

LOS ANGELES, Calif., July 10.—Suit for between $2,500,000 and $3,000,000 in federal oil and gas royalties from six companies operating in the North dome of Kettleman Hills was filed in federal court today.

F. B. Critchlow and James A. Murray, special assistants to the attorney-general, charged that the companies, with exception of Richfield, have "controlled and monopolized" the crude oil and gas market, paying "arbitrary and unreasonable" prices.

The secretary of the interior, they said, had refused to accept these prices as properly measuring the value of the Government's royalty interests in the products of its lands and had set a minimum value on them. The suit asks the court to uphold the secretary's valuations and require the defendant companies to pay approximately $2,500,000 claimed due on that basis between 1931 and 1939. If the secretary's valuations are not upheld, the Government asks the defendants be required to pay past due royalties on the basis of the actual values of the oil and gas produced, estimated at more than $3,000,000. The suit charges "immense quantities" of gas have been taken "improvidently" from the field and marketed.

Defendants are General Petroleum Corp. of California, Standard Oil Co. of California, Shell Oil Co., Inc., Tide Water Associated Oil Co., Union Oil Co. of California and Texas Co.

Elm Oil Co. Awarded $2,500 Damages From Union

LOS ANGELES, Calif.—Superior Justice Fred Miller at Long Beach granted Elm Oil Co. $2,500 damages in its $25,000 suit against members of the Oil Workers Union and C.I.O. and permanently enjoined the unionists from picketing its refinery. The company charged during the 3-week trial that its business had been damaged by the refinery picketing during an inter-union dispute. The company also said it had no dispute with the employes and the latter also testified that wage and hour conditions were satisfactory.

Judge Miller decided, in accordance with a recent decision of the District Court of Appeals, that picketing for unionization alone is illegal.

Purchasing of Mexican Silver Affects Oil Negotiations

By HENRY D. RALPH

WASHINGTON, D. C., July 10.—The battle over monetary legislation which has engaged the U. S. Senate for the past two weeks has had a direct effect upon negotiations between the State Department and the Mexican Government over the expropriation of American oil properties in Mexico, and the administration has intervened to prevent any further change in the program of purchasing Mexican silver.

Quite apart from the bill to continue the president's powers to devalue the gold dollar, the Senate committee on banking and currency has for some weeks been studying a bill sponsored by Senator John G. Townsend, Jr., of Delaware to terminate the program of purchasing foreign silver, and the committee met last Friday with the intention of making a favorable report on this measure. Action was deferred, however, when the Senate majority leader, Senator Alvin W. Barkley, of Kentucky, told the committee the president is much concerned over the possibility that such legislation would seriously interfere with the pending oil negotiations. At Senator Barkley's request the committee agreed to postpone a vote until it has heard Secretary of State Hull describe the status of the negotiations at an executive session this week.

The silver purchase program, started early in the Roosevelt administration, directs the Treasury to purchase foreign silver at a price to be set by it until the stock of silver reaches a ratio of 4-to-1 compared with gold holdings. The purpose of this legislation was to increase the monetary value of silver throughout the world on the theory that this would increase all commodity prices and improve the economic conditions of nations on a silver currency standard. This effect has not been achieved and the principal result of the program has been to benefit nations which produce silver, particularly Mexico, at tremendous cost to the U. S. Treasury.

The monetary powers bill which led to such a battle in the Senate originally had nothing to do with the silver purchase program and as it passed the House it provided simply for a continuation of the president's powers to devalue the dollar and for continuation of the Treasury's international currency stabilization fund. Opponents of devaluation in the Senate made a deal with the so-called silver block under which the Senate voted to terminate the devaluation power, to increase the price which the Treasury must pay for newly mined domestic silver, and to terminate foreign silver purchases. Eventually the Senate reversed itself and the devaluation power was restored while the "silver Senators" secured enactment of a provision fixing a higher price for domestic silver than the Treasury had been paying for some time, but the restriction on foreign purchases was dropped. During the interval, however, world silver prices tumbled and the Treasury fixed its purchase price at 36.75 cents per ounce as compared with a price of 43 cents per ounce which has been maintained for many months.

SINCE world silver prices have been held up by the Treasury's purchase program, the recent drop has had a serious effect upon Mexican economy and the Mexican peso. Silver is one of Mexico's chief exports and a large part of its production has been absorbed by the U. S. Treasury. There have been suggestions that if the Treasury stopped buying or if its price is too low the Mexican Government may expropriate American-owned silver mines, as taxes on silver mining and export have been one of the principal sources of revenue for the Mexican Government since it expropriated American oil properties. Some sort of negotiations over the oil expropriation are now in progress between the two governments, although the nature of them has never been made public, and it is understood these negotiations received a serious setback when world silver prices fell.

The inference is that Secretary Hull will tell the Senate committee the only hope of receiving payment for the oil properties and of keeping Mexico from further expropriations lies in continued subsidization of Mexican silver exports. The Senate committee, however, is dominated by conservatives unfavorable to the costly silver purchase program. Critics of the administration's "good neighbor" policy with respect to Mexico are already referring to the silver purchase program as a form of blackmail under which silver purchases are the price for refraining from further expropriations of American property.

Depletion Allowance

THE income tax depletion allowance which has given the oil industry anxious moments every time a new revenue bill has been under consideration is again scheduled for scrutiny by Congress next spring. A subcommittee of the House ways and means committee has been delegated the task of making a thorough study of the entire tax structure preliminary to a general revision of all internal revenue laws, and the depletion section is sure to find a place in this study.

The subcommittee, headed by Representative Jere Cooper of Tennessee, will begin its studies early in the fall, aided by its own permanent research staff and Treasury Department experts. No public hearings are planned, but a report is scheduled to the full committee early next spring and if the report becomes the basis of a new revenue bill hearings will be held at that time.

The depletion allowance was discussed briefly by the committee when the undersecretary of the Treasury, John W. Hanes, appeared before it last week to urge the committee to undertake the study. Questioned by members of the committee, Mr. Hanes declared that the depletion provisions have been given much study by the Treasury Department in recent months and its conclusions will be presented to the committee by the time it reaches the subject in the fall. He would not predict what the recommendation would be but declared it is a conscientious and complete study.

The depletion allowance was attacked by the Treasury as a "loophole" two years ago when President Roosevelt was much exercised about tax evasion and avoidance and the administration forced through the now defunct undistributed profits tax. At that time the ways and means committee considered the depletion provision briefly but refused to recommend any change in it. Since that time the Treasury has assumed a different attitude toward taxes and is seeking to revamp the revenue laws in order to make them least harmful to business. The depletion allowance provision, however, has long been a source of contention in the Internal Revenue Bureau and many officials there seriously feel the allowance operates too greatly for the benefit of oil producers and prevents the collection of much revenue which would otherwise be obtained.

Tax on Inventories

A NEW administrative provision which may be of much value to many oil companies is included in the new revenue law just signed by the president. The provision authorizes use of the so-called "last-in-first-out" method of valuing inventories, whereas previous law has required use of the "first-in-first-out" method.

Under the method which the Treasury has required for a good many years a corporation has been liable for taxes on an increase in the value of its inventory during the tax year. Under the "last-in-first-out" method of accounting which is now optional with the taxpayer an increase in inventory is not counted as a profit and a decrease in inventory value is not deducted as a loss. A corporation may adopt a new method if it chooses, but, if it uses this method for tax purposes it must also use the same accounting practice for all other business purposes.

The amendment was put in chiefly at the instance of leather tanners, paper manufacturers, and fabricators of nonferrous metals, but it is equally applicable to any manufacturer or dealer carrying large stocks in storage or in process, particularly where the value of these stocks is subject to price fluctuations. The old method of taxation was much criticized by accountants and business men on the ground that an increase or decrease in the value of stocks on hand does not constitute actual profit or loss since usually the inventory is kept for operating purposes and not for speculation, and replacements must be made at the new price.

Under the "last-in-first-out" method a company closing a year with the same quantity of inventory as when the year began would consider that the inventory on hand had been disposed of and replaced at the price at the close of the year. For example, if stock on hand was purchased at $1 per unit and advanced during the year to $2, there is a theoretical inventory profit, but actually the raw stock must be replaced as rapidly as the finished goods are sold and in this case the new supply would have to be bought at $2 per unit.

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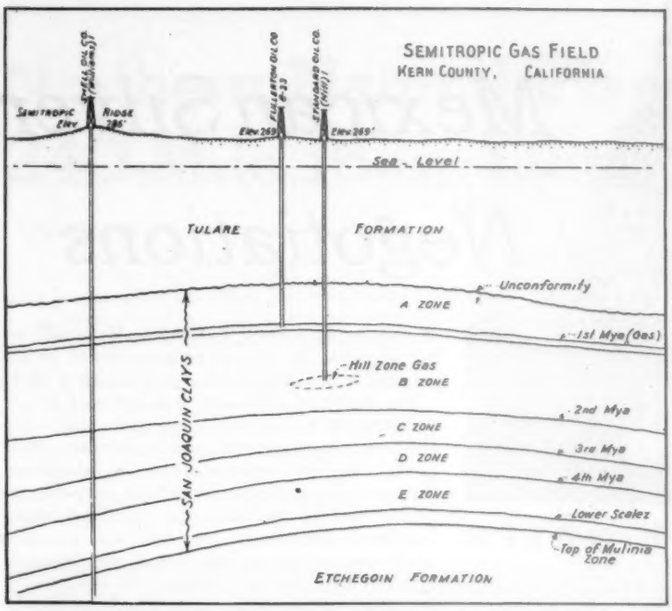


California Gas Follows Oil

By L. P. STOCKMAN

This is the third article in a series on natural gas developments in California. The first was published May 4 and the second May 25.

The present highly specialized status of the California natural gas industry is the outgrowth of a consistent expansion coincident with the progressive increase in the petroleum industry, especially during the past decade.

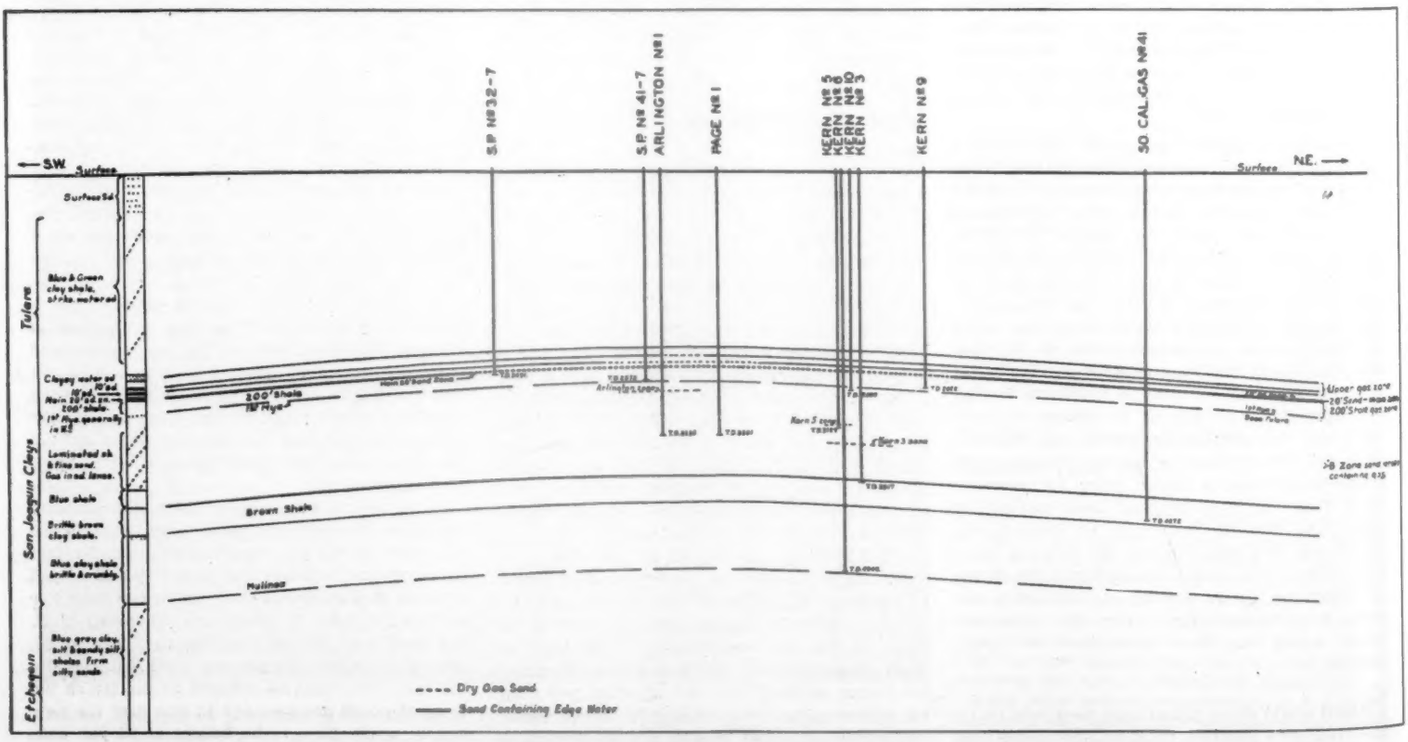
At present California's gas reserve is situated in the San Joaquin basin and in the north central part of the state in Solano, San Joaquin, and Sacramento counties with additional potential gas fields in Colusa and Glenn counties where drilling has not progressed far enough to indicate their economic importance. This means that the southern California area must be supplied by natural gas brought in from the area north of the Tehachapi Mountains and from the Goleta gas field of Santa Barbara County to augment production of Los Angeles Basin fields.

The topographic feature known as Semi-Tropic Ridge emerges from the Pozo Delta about 10 miles south of Wasco and fades out in Township 26s, Range 21e. This feature has been known for at least 15 years and during this time its significance in relation to buried geological structure has been subject for debate. Those who saw clear evidence of an anticlinal structure in its alignment parallel to other San Joaquin Valley structures and in an antecedent drainage channel crossing the northwest end of the ridge were forced to admit that the topography gives no proof for southeast structural closure. As a result, drilling and leasing activities had been carried on intermittently for a number of years. Recent gas discoveries in the Semi-Tropic gas field are very largely the result of seismograph surveys.

During the progress of drilling it was found that the gas sands were thin and lenticular. Two disconnected sand lenses in the first Mya zone of the San Joaquin and several sand lenses in the lower part of the B zone of the San Joaquin clay offered production possibilities. The producing sands are unconsolidated and no measure of their porosity or permeability can be made, but values for both should run high. The separate sand beds range in thickness up to 10 feet. The productive sands of the first Mya zone range in depth from 2,315 to 2,408 feet, and the productive sands of the B zone range from 3,002 to 3,215 feet. The total number of acres in the field is 3,500 to 4,000. Thirty-nine wells have been drilled, of which 20 are now productive and 19 have been abandoned.

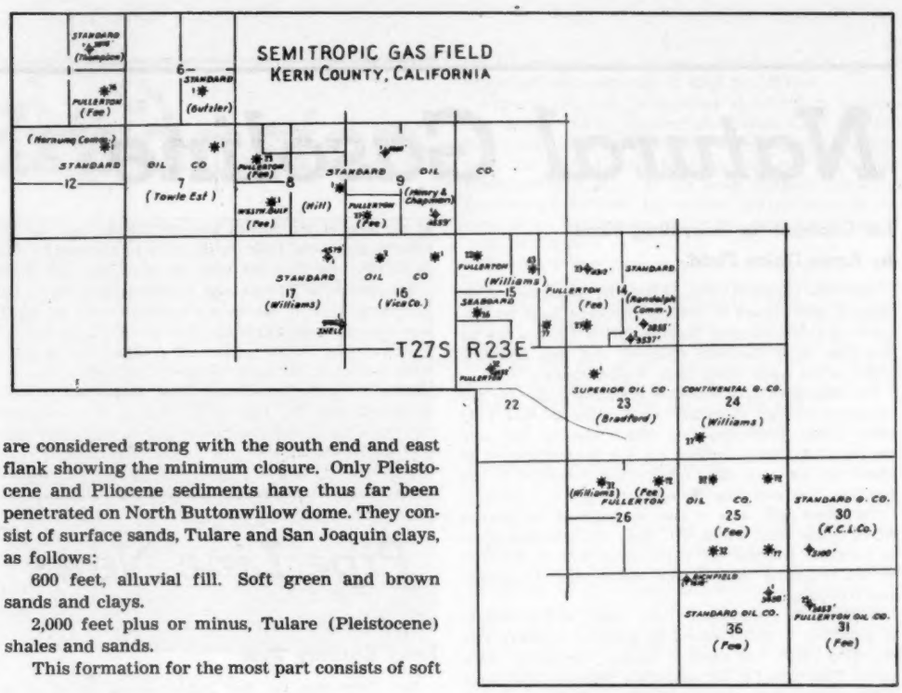
The Buttonwillow gas field is located on the floor of the San Joaquin Valley about 30 miles west and 5 miles north of Bakersfield, Kern County.

This field was subsequently developed until it now has 26 producing gas wells; four have gone to water after producing relatively small quantities of gas, four additional offstructure wells were unsuccessful, and Nos. 1 and 6 Kern were not completed as gas wells because of mechanical difficulties. Although the latter well, No. 6 Kern, was started as a deep test, no well has been drilled



Cross section of Buttonwillow gas field

Industry Trend



below 4,946 feet on this structure. Recent deep wells in this area indicate an extreme depth for the now known oil-producing sands of the valley-floor fields.

Geology

The structure of Buttonwillow is a gentle anticlinal fold having a northwest-southeast trend. There has been definitely demonstrated 200 feet of closure by drilling, although considerable more is probably present. The west flank and north end are considered strong with the south end and east flank showing the minimum closure. Only Pleistocene and Pliocene sediments have thus far been penetrated on North Buttonwillow dome. They consist of surface sands, Tulare and San Joaquin clays, as follows:

600 feet, alluvial fill. Soft green and brown sands and clays.

2,000 feet plus or minus, Tulare (Pleistocene) shales and sands.

This formation for the most part consists of soft crumbly blue-gray clay shale containing abundant fresh-water fossils, principally Anadonta, Amnicola, and Ostracod. Streaks of sand are relatively common and toward the base of this formation form the principal gas zone for the field. The base of this formation and the top of the San Joaquin clay series is marked by the first Mya zone. This zone is of variable thickness, but consists generally of 10 to 50 feet of shale or coarse water sand containing abundant Mya, Cryptomya, Elphidium, and small oysters. Top of the San Joaquin clays (upper Pliocene) is marked by the first occurrence of brackish water fossils, and its base is marked by the first definite marine forms.

The formation has a thickness of approximately 2,400 feet and is composed of alternating brackish and fresh-water beds similiar in lithology to the overlying Tulare except for a 300-foot bed of brown platey shale that occurs about 1,100 feet below the top of this formation. About 200 feet below the top of this brown shale a thin zone of Scalez petrolia occurs. Below the first Mya and above the brown shale is a thick series of laminated shale and fine sands in which are found occasional sand lenses produced in the B-zone wells. The Etchegoin formation has not been penetrated in Buttonwillow, but from the position of the second Scalez zone is believed to occur at approximately 5,000 feet.

The San Joaquin clay, Etchegoin contact, is marked by the Mulinia bed, the first occurrence of true marine fossils. The Etchegoin apparently is entirely marine and considerable portions carry a good marine fauna. Lithologically this formation consists of a thick series of gray sandy silt shales and massive clay silt shale believed to offer few gas or oil horizons. The Etchegoin probably extends to 9,800 feet plus or minus, below which should be found the Reef Ridge shale, the McLure brown shale, the Olcese sand, and at an estimated depth of 15,000 feet the Vaqueros sandstone. This zone, also known as Vedder or Rio Bravo, carries the only known producing sand that can reasonably be expected under this structure, although upper sands, at present unknown, may prove productive.

The present productive area of the Buttonwillow field is 1,600 acres. Since January 1, 1930, a total of 10,115,064,000 cu. ft. of gas has been produced. The remaining reserve is estimated by a modified pressure-decline method as 18,000,000,000 cu. ft.

(Continued on Page 114)

TABLE 1—SEMI-TROPIC GAS FIELD

Geological column			Approximate thickness
Recent	Alluvium		
Pliocene | Pleistocene	Tulare formation—Sandy clays and water sands		1,836 feet
	San Joaquin clay	"A" zone—Tan clay	543 feet
		First Mya zone—Blue clay with thin sands	40 to 50 feet
		"B" zone—Interlaminated green clay and gray silt with few thin beds of sand	827 to 994 feet
		Second Mya zone—Sandy gray clay	42 to 74 feet
		"C" zone—Brown claystone	348 to 390 feet
		Third Mya zone—Silty gray clay	9 to 32 feet
		"D" zone—Interlaminated green clay and gray silt	259 to 312 feet
		"E" zone—Green, blue, and brown clays, with member containing silt laminae	500 feet ±
Miocene	Etchegoin	Siltstones—Tight sandstones; mostly silty shale toward base	4,460-4,850 feet
	Reef Ridge	Shale	710 feet
	"The Brown Shale"	Siliceous shale	2,100 feet
	Temblor	Sandstone and shale	2,030 feet
	Vedder	Sandstone	

TABLE 2—GAS ANALYSES—SEMI-TROPIC GAS FIELD

	Standard Oil Co. No. 1 Hill	Fullerton No. 76.1	Fullerton No. 27-14	Standard Oil Co. No. 2 Pioneer Fruit*
CO_2	0.1	0.0	0.0	0.2
CH_4	99.5	98.7	98.6	96.4
N_2	0.4	1.3	1.4	2.6
O_2	0.0	0.0	0.0	0.8
Specific gravity	.560	.560	.560	.565
B.t.u. (calculated)	990	979	978	962

*Sample apparently contains air.

SEMI-TROPIC GAS FIELD
Kern County, California

Company—	Well number	Location S.T.R.	Total depth	Status	Initial production M.c.f.	Date completed
Standard Oil Co.	1 Hill	8-27-23	3,200	Discovery well	107,000	March 8, 1935*
Standard Oil Co.	1 Towle	7-27-23	2,355	Gas well	40,000	June 16, 1935
Standard Oil Co.	1 Hernung	12-27-22	2,426	Gas well	16,000	July 8, 1935
Standard Oil Co.	1 W.G.O.	8-27-23	2,361	Gas well	2,200	July 25, 1935
Standard Oil Co.	1 Gutzler	6-27-23	2,408	Gas well	26,730	September 24, 1935
Standard Oil Co.	1 Goldman	5-27-23	5,698	Abandoned	None	October 1, 1935
Standard Oil Co.	1 Williams	17-27-23	4,579	Abandoned	None	October 3, 1935
Standard Oil Co.	1 Smith fee	9-27-23	4,250	Abandoned	None	October 8, 1935
Standard Oil Co.	1 Pioneer Fruit	16,27-23	3,215	Gas well	12,580	October 26, 1935
Standard Oil Co.	1 Randolph	14-27-23	2,855	Abandoned	None	October 16, 1935
Standard Oil Co.	1 Thompson	1-27-22	3,876	Abandoned	None	October 18, 1935
Standard Oil Co.	2 Pioneer Fruit	16-27-23	3,051	Gas well	14,000	October 29, 1935
Standard Oil Co.	7-1 K.C.L.	30-27-24	5,100	Abandoned	None	November 10, 1935
Standard Oil Co.	1 Redding	36-27-23	3,445	Abandoned	None	November 6, 1935
Standard Oil Co.	1 Chapman	9-27-23	4,570	Abandoned	None	November 18, 1935
Standard Oil Co.	8-1 K.C.L.	20-27-24	5,035	Abandoned	None	November 26, 1935
Fullerton Oil Co.	27	14-27-23	2,463	Gas well	11,800	May 29, 1935
Fullerton Oil Co.	76	1-27-22	2,391	Gas well	17,000	May 30, 1935
Fullerton Oil Co.	72	26-27-23	2,395	Gas well	10,000	June 19, 1935
Fullerton Oil Co.	27	9-27-23	3,150	Gas well	37,000	June 28, 1935
Fullerton Oil Co.	32	25-27-23	2,441	Gas well	34,000	July 6, 1935
Fullerton Oil Co.	23	8-27-23	2,347	Gas well	7,000	July 14, 1935
Fullerton Oil Co.	37	25-27-23	2,427	Gas well	24,560	July 20, 1935
Fullerton Oil Co.	77	15-27-23	2,414	Gas well	23,500	July 31, 1935
Fullerton Oil Co.	23	14-27-23	4,312	Abandoned	None	September 15, 1935
Fullerton Oil Co.	77	25-27-23	2,439	Gas well	1,900	October 22, 1935
Fullerton Oil Co.	32	22-27-23	4,032	Abandoned	None	October 10, 1935
Fullerton Oil Co.	23	31-27-23	2,453	Abandoned	None	November 25, 1935
Seaboard Oil Corp. (Milham)	22 C.O.C.	15-27-23	3,137	Gas well	21,000	June 28, 1935
Seaboard Oil Corp. (Milham)	63 C.C.C.	15-27-23	2,429	Gas well	17,000	July 16, 1935
Seaboard Oil Corp. (Milham)	26 C.O.C.	15-27-23	2,385	Gas well	1,725	September 3, 1935
Seaboard Oil Corp. (Milham)	27 C.O.C.	24-2723	2,486	Gas well	1,700	October 12, 1935
Superior Oil Co.	1 Bradford	23-27-23	2,418	Gas well	26,000	July 28, 1935
Superior Oil Co.	2 K.C.L.	34-27-24	8,732	Abandoned	None	January 16, 1936

*Note: Standard Oil Co. No. 1 Hill spudded December 28, 1934; blew out and caught fire February 10, 1935, and wrecked rig. Recompleted March 8, 1935.

Natural Gasoline

Let Contract for Recycling Plant In Agua Dulce Field

CORPUS CHRISTI, Tex.—Clyde H. Alexander, J. R. Sherrin, and Robert T. Wilson, partners, have let contract to Stearns-Rogers Manufacturing Co. for the installation of a distillate recovery and gas recycling plant in the Agua Dulce field, Nueces County.

The operators have acquired operating rights for gas recycling on approximately 8,000 acres in that field from Union Producing Co., which already has contracted with Carter Drilling Co. for the drilling of 36 additional wells on the property for operation of the recovery and recycling plant.

The plant will have a total capacity of 150,000,000 cu. ft. of gas daily, which will make it the largest plant so far to be constructed. Three sands will be involved in the recycling project, the Bentonville, Comstock, and Schroeder.

In the same field, Agua Dulce Corp., which already is operating a 60,000,000-cu. ft. gasoline recovery and recycling plant, has made a similar transaction with Union Producing Co. for operating rights on additional acreage, on which contract has been let to Allen & Morris for five wells for expansion of the company's recycling operations.

Natural Gasoline Production Increased in United States

The production of natural gasoline in April 1939 continued to increase, according to a report prepared by the Bureau of Mines. The daily average in April was 5,925,000 gal. compared with 5,734,000 gal. in March, and 5,839,000 gal. in April 1938. The chief gains occurred in the East Texas, Texas Gulf, and Panhandle districts.

Stocks continued to increase and the total on hand at the end of the month was 230,328,000 gal., or 32,046,000 gal. more than on the first of the month, but 29,190,000 less than the total on hand April 31, 1938.

Shipments to jobbers and retailers decreased from 12,138,000 gal. in March to 9,996,000 gal. in April, and exports from 24,990,000 gal. to 14,532,000 gal.

The average vapor pressure for shipments to refineries remained the same as for March, while that for shipments to refinery-owned bulk plants and exports increased, and for jobbers decreased. The weighted average for all movements was 19.7 lb. compared with 19.6 lb. in March and 19.4 lb. in April 1938.

PRODUCTION AND STOCKS OF NATURAL GASOLINE

(Thousands of gallons)

	Apr. 1939	Mar. 1939	Jan.-Apr. 1939	Jan.-Apr. 1938	At refineries
East Coast	.....	.....	.....	.....	8,526
Appalachian	6,017	6,990	27,288	26,274	504
Illinois, Michigan, Kentucky	1,135	1,149	4,824	3,989	2,730
Oklahoma:	37,879	38,383	148,359	162,344	2,688
Oklahoma City	9,107	9,340	36,139	50,574	.....
Osage County	4,360	4,356	16,617	16,105	.....
Seminole	10,787	10,399	40,123	41,459	.....
Rest of state	13,625	14,288	55,480	54,206	.....
Kansas	5,088	4,806	20,235	18,684	84
Texas:	59,805	55,851	219,532	210,644	3,864
Gulf	6,221	5,558	21,536	15,389	3,192
East Texas	17,033	15,214	59,578	60,121	.....
Panhandle	20,252	19,597	78,113	79,053	.....
North Texas	2,320	2,317	8,800	8,301	.....
West Central	5,624	5,881	22,504	23,006	.....
Rest of state	8,355	7,284	29,001	24,774	.....
Louisiana	6,877	6,704	27,473	28,502	126
Arkansas	2,199	2,453	8,666	7,543	210
Rocky Mountain	7,556	7,626	28,380	23,927	840
California:	51,188	53,782	207,193	220,417	87,570
Huntington Beach	2,942	3,029	11,869	14,074	.....
Kettleman Hills	14,100	15,009	58,884	61,243	.....
Long Beach	7,300	7,498	28,617	28,635	.....
Santa Fe Springs	4,810	5,031	19,577	21,487	.....
Ventura Avenue	4,753	5,271	19,931	19,007	.....
Rest of state	17,283	17,944	68,315	75,971	.....
Total	177,744	177,744	691,950	702,324	107,142
Daily average	5,925	5,734	5,766	5,853	.....
Total (thousands of barrels)	4,232	4,232	16,475	16,722	2,551
Daily average	141	137	137	139	.....

RECEIPTS AND DELIVERIES OF NATURAL GASOLINE

(Thousands of gallons)

	Deliveries				Receipts		
	To refineries	To refinery-owned bulk plants	To jobbers and retailers	Exports	At refineries	At refinery-owned bulk plants	By jobbers and retailers
East Coast	.....	.....	.....	.....	4,198	8	28
Appalachian	3,520	365	2,343	16	2,693	365	1,441
Indiana, Illinois, Kentucky, etc.	794	16	192	.....	13,757	1,895	1,933
Oklahoma	21,804	1,071	1,897	508	12,035	30	1,446
Kansas, Missouri, etc.	2,979	211	250	.....	8,699	281	357
Texas inland	29,245	1,053	2,910	73	.....	.....	.....
Texas Gulf	4,796	.....	296	12,053	24,574	127	2,707
Louisiana and Arkansas	4,524	293	1,409	326	2,403	301	1,345
Rocky Mountain	6,678	57	57	.....	5,981	59	97
California	48,720	.....	642	1,554	48,720	.....	642
Total	123,060	3,066	9,996	14,532	123,060	3,066	9,996
Daily average	4,102	102	333	484	4,102	102	333
Total (thousands of barrels)	2,930	73	238	346	2,930	73	238
Average V.P.	20.6	15.1	13.8	17.3	20.6	15.1	13.8

Pipe Line News

Bay Petroleum Co. Line From Roxbury Pool

Bay Petroleum Co. has started work on a pump station and 4-in. line from its McPherson refinery to the Roxbury pool in McPherson County, Kansas, a distance of 11 miles. The line will give the pool its first pipe line outlet. Heretofore oil has been trucked. Krupp Construction Co., Great Bend, has the contract.

Talk of K.M.A. Line to Gulf Is Again Being Revived

WICHITA FALLS, Tex.—Talk that the K.M.A. field may get an outlet to the Gulf Coast is revived as independent operators continue efforts to gain a pipe line. A group of producers has signed up 15,000 bbl. of production, with plans for obtaining some 25,000 bbl. daily. Construction of the line, to be owned and operated by producers, would be financed by independent operators, local banks and outside capital, according to present plans. The line would be of 8- or 10-in. with a capacity of 25,000 bbl. daily. The oil would be exported from the Gulf Coast through the facilities of a large marketer.

In North Texas 6,000 bbl. daily is moving under the posted price. While the K.M.A. field is now in relatively good shape, following completion of Sinclair Prairie Pipe Line Co. 65-mile line last month, new discoveries and especially the Bryson field lack sufficient demand at posted prices.

Northern Natural Declared to Be Subsidiary Company

WASHINGTON, D. C.—The Securities and Exchange Commission has denied applications of Northern Natural Gas Co. for orders declaring it not to be a subsidiary of Lone Star Gas Corp., United Light & Railways Co., United Light & Power Co., North American Light & Power Co., and North American Co.

S.E.C. found United Light & Railways owns 35 per cent of the company's voting stock. North American Light & Power owns 35 per cent and Lone Star owns 30 per cent. It also reported the company's directors were designated by the three companies.

"The evidence plainly shows each of the proprietary companies exercises a controlling influence over the management and the policies of the applicant as to all important matters," S.E.C. said in its decision. "In our opinion, this influence makes it necessary in the public interest, and for the protection of investors and consumers, that the applicant be subject to the obligations, duties, and liabilities imposed by the act on subsidiaries of registered holding companies."

Consolidated Gas to Build Booster Station at Twitty

FORT WORTH, Tex.—Roy Carlton, field superintendent, announced Consolidated Gas Utilities Corp. will begin construction about July 15, of a new booster station near Twitty, 7 miles north of Shamrock. The plant will cost about $100,000. It will develop 1,200-hp. and will be on the Consolidated 14-in. line, which serves Oklahoma and Kansas with gas from the Wheeler County field.

Socony-Vacuum Big Muddy Line Now in Operation

CASPER, Wyo.—The 20-mile 4-in. line from the Big Muddy field to the Socony-Vacuum refinery east of Casper has been placed in operation and is transporting some 1,250 bbl. of Big Muddy crude daily to the Casper plant. The line, laid by Socony-Vacuum, ties in with the Continental gathering system. Crude is obtained by a marketing arrangement with Continental which formerly ran the production to its Glenrock refinery. These runs will be replaced with an equal quantity of Leo crude from the Lance Creek field, transported through the 65-mile link recently completed between the field and the Glenrock plant.

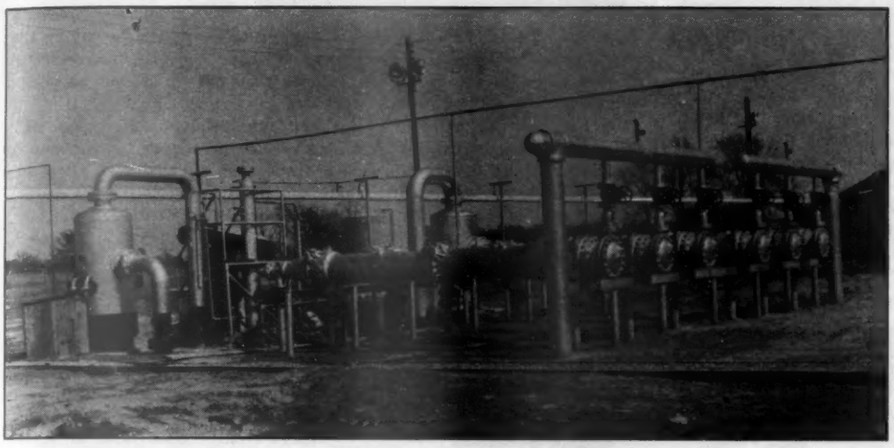
Panhandle Eastern Files Notice on Mo-Kan Stock

WASHINGTON, D. C.—The Panhandle Eastern Pipe Line Co. has filed with the Securities and Exchange Commission a statement of intentions to offer 80,000 shares of no par common stock to stockholders of Mo-Kan Pipe Line Co. at $25 a share. The unsubscribed portion will be purchased by Columbia Oil & Gasoline Co. at that amount.

Third 18,100-Ton Tanker for Atlantic Refining Co.

PHILADELPHIA, Pa.—The third of the Atlantic Refining Co. new 18,100-ton welded tankers will be launched at the yards of the Sun Shipbuilding & Dry Dock Co., Chester, Pa., July 29. It will be christened by Mrs. E. J. Henry, wife of a vice president of Atlantic, for whom the vessel will be named.

Refinery Expansion



High-pressure exchangers in a field gas system

Refiners Seek Lower Rail Rates From Mid-Continent Points

ST. LOUIS, Mo., July 11.—Many Mid-Continent refiners are represented here today to press their case before the Southern Rate Bureau and the Western Trunk Line Committee for lower rates on petroleum products moving from southwestern plants. The proposed rates are 22 per cent under present prices. This formal presentation follows the preliminary hearing in Chicago held June 27, at which arguments for the reduced rates lead to the conclusion that a reduction in tariffs would recapture a substantial portion of the business now moving from this area by pipe line, truck, and water.

New Oklahoma Plant to Be Built at Chickasha

W. M. Burwell, of Chickasha, Okla., has obtained a state charter for a refinery at Cement to be operated under the name of Oilcraft, Inc. It is being designed to handle approximately 2,000 bbl. of oil daily.

Kier Still, Refinery Pioneer, Found in Brickyard

SALINA, Pa.—Discarded in a corner of an industrial plant here lie the rusted remains of a 5-bbl. still, one of the earliest milestones in development of oil refining. The still was built about 85 years ago by Samuel M. Kier.

George L. Whitsell, superintendent of the plant, said the petroleum "refinery" was the first in the western hemisphere. It was used for some years, then abandoned in Kier's brick-making plant.

Cooperative Plant to Be Built in Kansas Fields

CHICAGO.—A cooperative refinery will be constructed shortly at Phillipsburg, Kans., by the Cooperative Refinery Association at a cost of $750,000, according to announcement from the general offices of the Rock Island Lines which will serve the industry. The new plant, located on a 50-acre tract, will include an office building, bulk storage tanks, cracking plant, loading racks, etc.

This refinery will process 3,000 bbl. of Kansas crude oil daily, securing this crude oil through a 40-mile pipe line from northern Kansas oil fields. The plant will produce 90,000 gal. daily of gasoline and light oils and from 500 to 750 bbl. of fuel oil. The fuel oil will be used by the Rock Island Lines in its operations in this territory. In constructing this refinery from 200 to 250 men will be employed. After the refinery is constructed from 50 to 60 men will be employed regularly.

Western Canada Refineries Expand Crude Oil Capacities

CALGARY, Alta.—The current year is being marked by refinery expansion at many points in the prairie provinces. In East Calgary the new British American Oil Co. refinery was recently completed at a cost of $1,350,000 with capacity of 4,500 bbl. a day.

Imperial Oil, Ltd., is spending $1,700,000 to increase the capacity of its Calgary plant from 6,000 to 7,500 bbl. a day, the work including improving and modernizing the existing plant and installing a new cracking plant. Early in the year the same company spent approximately $300,000 to enlarge and improve its Regina, Sask., plant, stepping up the capacity to around 7,500 bbl. a day.

Three western refiners are installing Dubbs cracking units at a total cost exceeding $500,000. These will practically double the recovery of gasoline from Turner Valley crude. The plants include the Anglo-Canadian Oil Co., Brandon, Man., increased from 750 to 1,300 bbl.; Gas & Oil Products, Ltd., Turner Valley, increased from 2,000 to 3,000 bbl.; Lion Refineries, Calgary, increased from 500 to 1,000 bbls.

Kerosene Burner Supplies Electricity for Radio

A demonstration was held last week under the auspices of the Tulsa Chamber of Commerce to show that a low-voltage, 4-tube, radio set can be run on current generated by thermocouple equipment. Kerosene, in a pressure burner, was used for fuel. The demonstration was conducted with a 12-volt unit; it was claimed that in operating the set with 1.4 amperes, 1.6 volts it is possible to run such a radio for 42 hours on a gallon of kerosene. This equipment has been developed by Dr. Otto Herman, of St. Louis, Mo., for the purpose of supplying farmers who now depend upon batteries for the current needed for their radios.

Prepare Liquefied Gases From Coal as Fuel

LLOYDMINSTER, Sask.—Experiments conducted in a pilot plant at Saskatoon by the A. C. Chemical Co. have succeeded in producing liquid fuel from coal gas. The company is planning to erect a commercial plant at Lloydminster to utilize natural gas produced in that area.

Natural Gas News

California Gas Consumption Was 14 Per Cent More

SAN FRANCISCO, Calif.—Pacific Coast gas companies furnished 14 per cent more fuel to consumers in May this year than last, but got only 1.2 per cent more money for it. Sales totaled 17,227,319,000 cu. ft. for $7,208,023. Business in the first 5 months of 1939 rose to 99,550,030,000 cu. ft. The gas bill ran $45,826,660, up 4.6 per cent.

California, accounting for the bulk of the far western business, consumed 15,450,620,000 cu. ft. of gas in May, and 90,152,140,000 cu. ft. in the 5 months. Both were new high records for the respective periods, and up 14.5 and 12 per cent, respectively.

Suit Over Michigan Gas Field Dismissed by Court

SAGINAW, Mich., July 10.—Consumers Power Co., serving this and several other Michigan cities with natural gas, won a legal battle for dismissal of a $10,000,000 damage suit last Friday when Circuit Judge Earl C. Pugsley, at Big Rapids, dismissed claims of Roy F. Ide of Detroit and 31 coplaintiffs.

Mr. Ide, attempting to void contracts between gas well owners and the power company, charged Consumers had conspired in restraint of trade in the Tri-Township gas field near Big Rapids. Plaintiffs contended Consumers was stifling production of gas in the field.

The decision, ending a case pending in Mecosta County Circuit Court more than 2 years, asserted claims of fraud were not upheld, that the bill of complaint presented a confusion of conflicting issues and that there was a misjoinder of parties and causes and action.

Shipment of Helium to Poland To Be Loaded at Houston

HOUSTON, Tex.—Approximately 200,000 cu. ft. of helium gas, in more than 1,015 high-pressure steel cylinder containers, will be loaded out of Houston on the Norwegian freighter, Vigrid, due to arrive July 17, destined for Gdynia, Poland. The gas is being shipped by freight from Amarillo. The U. S. Government recently authorized the export of helium in amounts not to exceed 500,000 cu. ft. per year to any country. The shipment to Poland is to be used for stratosphere test flights.

Canadian Gas Production And Import Figures

OTTAWA, Ont.—Natural gas production from all Canadian fields in April totaled 3,147,608,000 cu. ft. compared with 3,722,181,000 cu. ft. in March, and 2,928,521,000 cu. ft. in April 1938. Production for the 4 months ending April 30, 1939, was 15,102,911,000 cu. ft. against 14,140,495,000 cu. ft. for the same period last year, an increase of 6.8 per cent.

Imports of mixed (natusal and artificial) gas from Buffalo into Ontario in April amounted to 9,959,000 cu. ft. valued at $5,975 against 12,292,000 cu. ft. valued at $7,734 in March.

INTERNATIONAL

Brazilian Petroleum Plans Advanced by Mexican Contract

Consummation of the contract between Brazilian interests and the Mexican Government Petroleum Agency whereby the former would receive 5,500,000 bbl. of petroleum from the latter annually was reported last week by dispatches from Mexico City. Direct confirmation through oil company channels was not available, but it was learned that negotiations between representatives of the two countries had been under way for several months and there was general inclination among those following Mexican petroleum developments to credit the Mexico City report.

Dispatches reported that Brazil was prepared to spend $18,000,000 cash for Mexican petroleum and this was the only detail in the report which failed to receive general credence. The United States has agreed to make a direct loan of $19,000,000 to Brazil with credit arrangements up to $120,000,000 but the difference would be for stimulation of trade with this country. However, it was pointed out that the Brazilian interests involved in the contract with Mexico are of a private nature and that while they are backed by government sentiment the loan to that country probably would not be available for private diversion.

Announcement of the petroleum contract was made in Mexico City by Santo Vahlis, representative of the Brazilian firm of Correa and Castro. Under the agreement, he said, Mexico will sell approximately 5,500,000 bbl. of crude oil annually to Brazil along with asphalt and refined petroleum products.

Procurement of the Mexican crude supply is another step in Brazil's announced intention of forming a national petroleum distribution system. Private companies operating in Brazil are under rather severe regulation. The government has issued several decrees and passed new mining laws during the past 3 years severely restricting exploration, importation, distribution and refining. The laws of Brazil require that all refining must be carried out by native Brazilians and that all stock must be held by similarly qualified individuals. A subsidiary of Standard Oil Co. (New Jersey) lacked only a few days' work on a refinery at Sao Paulo when notice was given it would not be permitted to operate. The refinery has been standing more than a year in its practically completed state but there has been no modification of the order prohibiting its operation.

Working with Mr. Vahlis on the petroleum contract was Saldana Galvan, head of the Mexican Government-controlled newsprint agency. Some time ago Senor Galvan was sent by President Cardenas to Brazil and other South American countries to seek markets for oil produced by properties of United States, British and Netherland private companies expropriated in March 1938.

Mr. Vahlis said in Mexico City his firm would construct a new refinery at Rio de Janeiro costing approximately $3,000,000 and with a capacity of 10,000 bbl. per day. A check of United States refinery construction engineering firms and process licensors indicated no preliminary inquiry had been made so far in this country regarding the refining equipment. Mr. Vahlis was quoted in Mexico City as saying the Rio de Janeiro refinery equipment would come from the United States. Mr. Vahlis also referred to supplementary refinery capacity of 7,000 bbl. per day at Sao Paulo. Reference to the latter refinery was thought in this country to indicate that some form of negotiations may have been started between the Brazilian firm of Correa & Castro and the Standard of New Jersey subsidiary which built the Sao Paulo refinery but was never permitted to start operations.

Pending completion of the Brazilian refinery projects the contract with Mexico will be confined to refined products.

Jesus Silva Herzog, manager of the sales department of Pemex, the government oil agency, said in Mexico City that approximately 50,000 bbl. of gasoline would be shipped to Rio de Janeiro within a few days as the first movement under the new agreement. The Brazilian interests, according to Mr. Vahlis, plan establishment of a direct steamship line between Tampico and Rio de Janeiro for regular movement of crude and petroleum products under the contract.

There have been no new developments in negotiations between United States and British companies and President Cardenas aimed at a settlement of the expropriation issue. Conversations between Donald Richberg, counsel for the expropriated companies, representatives of the Mexican Government and officials of the Department of State have been continuing but nothing tangible has developed.

Propaganda against return of the properties to the private owners continues in Mexico. In an interview with Mr. Herzog last week the Mexican newspaper El Nacional quoted the Pemex official as saying that return of the properties would benefit only the "imperialist interests" at the expense of Mexico and would leave that nation as the harbor of "hungry miners and petroleum workers."

Members of the petroleum workers' union have not ceased their demands that the industry be turned over to them under an agreement similar to that by which railroads are operated by employes. Demands continue that the government assume the liability for back pay and increased wages judged against the private companies. Although the issue of back pay and higher wages precipitated the expropriation decree in March, 1938, the workers are still functioning for the government agencies under the pay scale previously obtaining.

Albania Petroleum Production Expanding Under Italian Rule

Development of Albanian petroleum resources under Italian auspices is steadily progressing, according to a report from Consul General W. H. Sholes, Milan, made public by the Department of Commerce. The exploitation rights are controlled by the Azienda Italiana Petroli Albania, the AIPA, which in 1925 received a 50-year concession from the Albanian Government. The company has sunk from 380 producing wells at a depth of from 1,200 to 2,500 ft. The crude obtained from these wells gives a natural yield of approximately 13 per cent of gasoline and the usual secondary products. It is claimed in Italy, however, that by the use of modern hydrogenation methods the gasoline can be raised to nearly 80 per cent.

Drilling operations by the AIPA have resulted in production of over 200,000 tons annually by Albanian wells. Italian authorities believe this total can be substantially increased in coming years.

During the first 2 months of this year, Albanian crude exports increased to 25,000 tons, an indication that 1939 production will be considerably higher than in 1938 and preceding years.

U. S. Oil Exports to Britain Show 43 Per Cent Gain

The United States' position as the second largest supplier of Great Britain's petroleum requirements is growing more secure with each passing month this year. During the first 5 months of 1939 the United States supplied 8,484,000 bbl. of petroleum and products to Great Britain, an increase over the comparable period last year of nearly 43 per cent. Netherland West Indies continues as the leading supplier of Great Britain's petroleum but shipments from that source this year compared to 1938 are lower by nearly 30 per cent. Receipts from the British West Indies (Trinidad) were more than doubled during the first 5 months of 1939 over the same period last year. The British Board of Trade does not acknowledge any receipts whatever from Mexico since the expropriation decree of March 18, 1938.

Receipts from Iran have increased nearly 1,000,000 bbl. so far in 1939 but that supplying country has been depressed to third position by the increase in shipments from the United States. At the end of 5 months in 1938 Iran was the second largest supplier being trailed by the United States. Shipments from Venezuela have increased by a little more than 1,400,000 bbl. and receipts from Rumania are up approximately 200,000 bbl. Losses have been incurred so far this year by the U.S.S.R., Peru and "other British" countries.

Details from the British Board of Trade report follow:

(Figures in U. S. barrels of 42 gal.)

Suppliers—	January-May 1939	1938
Netherland West Indies	11,393,000	16,227,000
United States	8,484,000	5,967,000
Iran	7,353,000	6,359,000
British West Indies	3,022,000	1,471,000
Venezuela	2,796,000	1,347,000
Iraq	1,986,000	2,105,000
Rumania	1,072,000	884,000
U.S.S.R.	906,000	1,015,000
Peru	324,000	423,000
Netherland East Indies	178,000	177,000
Mexico		*1,705,000
Other British	278,000	493,000
Other foreign	1,508,000	1,292,000
Total	39,300,000	39,465,000

*January to April only.

Automatic Injector
Ejector, Syphon or Jet Pump
"Navy Type" Liquid Level Gage
"Safeguard" Automatic Liquid Level Gage
"All-Iron" Automatic Liquid Level Gage
Gas Engine Lubricator
Snap Lever Oiler
Plain Brass Oil Cup
Plain Compression Grease Cup
Screw Plunger Grease Cup
Spring Compression Grease Cup
Automatic Electric Sump Pump
Automatic Cellar Drainer (Water or Steam Operated)
Dipless Air Cock
EMPTY SPACE SHOWS WHITE LIQUID SHOWS BLACK
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Preferred wherever liquid levels must be easily and positively visible . . . and when liquids are under pressure or at high temperature. Exceptionally rugged construction and made in any length desired for various kinds of liquids. Let us quote upon your requirements.
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LIQUID CHAMBER
GASKET
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Automotive Sales 57 Per Cent More Than First Half 1938

Automobile factory sales in June rose 3 per cent over May to an estimated total of 322,670, 70 per cent greater than June 1938. On this basis the Automobile Manufacturers Association reports a total for the first half year of 2,045,723 passenger cars and trucks, an advance of 57 per cent from the like period last year.

During the 5 months ending with May, the automobile manufacturers sold 1,723,053 motor vehicles, a gain of 54 per cent over the like period in 1938. Of this total 1,390,378, or 80 per cent, were passenger cars. The May factory sales represented 18 per cent of the 5-month total.

Of the 5 months' production, a total of 1,496,191, or almost 87 per cent went into the domestic market, and 1,382,793 were sold at retail. Sales to the domestic market were 73 per cent ahead of last year.

Domestic sales in May were 12 per cent below April, the same percentage decline as last year. Retail sales increased 3 per cent from April to May this year, however, whereas last year they declined by a like percentage.

Retail sales of passenger cars, which increased 4 per cent from April to May, totaled 1,164,149 units during the first 5 months, representing a gain of almost 43 per cent over last year. Commercial vehicle sales at retail gained about 26 per cent.

So closely was production geared to retail demand that in the first 5 months, sales to the domestic market exceeded retail sales by only 113,398 units. During April, dealers sold more than 3,000 units in excess of cars sold by the factories to them, while during May they sold almost 52,000 more cars than they bought from the factories, holding field inventories close to demand.

Foreign markets absorbed 43,213 units in May, a decline of 7 per cent from April, a definite improvement, compared with the 9 per cent decline last year. In the 5 months ending with May, a total of 226,862 units were absorbed by the foreign trade. Sixty-four per cent were passenger cars and 36 per cent trucks, or about the same division between passenger and commercial vehicles as last year.

AUTOMOBILE OUTPUT AND SALES

	Trucks and cars			Passenger cars		Trucks	
Total factory sales*—	1939	1938	% Change	1939	1938	1939	1938
June estimate‡	322,670	189,402			147,545		41,857
May	313,214	210,174	+49	249,455	168,599	63,759	41,575
April	354,263	237,929	+49	286,200	190,111	68,063	47,818
Monthly change, per cent	—12	—12		—13	—11	—6	—13
Five months	1,723,053	1,116,099	+54	1,390,378	865,074	332,675	251,025
U. S. domestic market†—							
May	270,001	168,174	+61	222,909	140,239	47,092	27,935
April	308,039	191,865	+61	257,058	160,028	50,981	31,837
Monthly change, per cent	—12	—12		—13	—12	—8	—12
Five months	1,496,191	865,975	+73	1,246,085	703,752	250,106	162,223
Retail sales in U. S.‡—							
May	321,614	222,997	+44	275,457	187,526	46,157	35,471
April	311,050	229,011	+36	265,898	193,392	45,152	35,619
Monthly change, per cent	+3	—3		+4	—3	+2	—0.4
Five months	1,382,793	988,912	+40	1,164,149	815,939	218,644	172,973
Foreign markets*—							
May	43,213	42,000	+3	26,546	28,360	16,667	13,640
April	46,224	46,064	+0.3	29,142	30,083	17,082	15,981
Monthly change, per cent	—7	—9		—9	—6	—2	—15
Five months	226,862	250,124	—9	144,293	161,322	82,569	88,802

*U. S. Census Bureau and Dominion Bureau of Statistics. †U. S. Census Bureau. ‡Automobile Manufacturers Association.

THE MARKETS*

CRUDE OIL: *New all-time peaks in crude production in Louisiana, Illinois, and Michigan, with general increases in several other states not considered favorable to crude market. Continuance of high rate in national production will tend to increase quantity of crude available under posted prices.*

REFINERY: *Gasoline supplies available on spot market exceed demand in several refining areas despite the fact that shipments are at high point of year, resulting in minor price concessions. Considerable gasoline offered at Gulf Coast points for coastwise and export movement. Light distillates and gas oils soft. Natural gasoline steady.*

TANK-WAGON AND POSTED DEALER: *Gasoline prices reduced at several points in East.*

FINANCIAL: *Oil stocks inactive throughout week. Average of 30 representative stocks for week ending July 8: High, 24.38; low, 23.73; close, 24. Week ending July 1: High, 24.92; low, 23.53; close, 23.88.*

Detailed information in market section.

Simplex Co. Sells Properties In Pine Island Field

SHREVEPORT, La.—Victor Wenzel, president of Simplex Oil Co., sold to W. W. McDonald and associates of Dallas, Tex., oil properties in the Pine Island field, Caddo Parish, for a consideration of $50,000 cash and $110,000 to be paid out of the first half of the oil runs and an overriding royalty of 1/32 from wells producing above the 2,750-ft. zone and of 1/16 on wells producing below that depth.

In announcing the sale Mr. Wenzel said Simplex Oil Co. has over 3,000 acres in Township 20n, Ranges 14 and 15w, on which are located about 27 oil and gas wells. This property is about 4 miles south of the deep test being drilled in the Pine Island field by Stanolind Oil & Gas Co. at No. 131 Dillon Heirs, Section 14-21n-15w.

Simplex Oil Co. was organized in 1927 by Victor Wenzel and the late Tom Taggart, U. S. senator from Indiana.

The new owners have holdings throughout Texas and are contemplating a large drilling program on the properties acquired from Simplex, it was stated.

Mr. Wenzel announced Simplex Oil Co. contemplates entering the royalty field in preference to active oil production.

DEATHS

RUTH ANN REXWINKLE, 9-year-old daughter of F. D. Rexwinkle, general superintendent of the Whiting refinery of Standard Oil Co. of Indiana, died from burns July 10.

H. M. MUNGER, 68, of Dallas, Tex., whose name provided the middle initial for the title of the K.M.A. oil field near Wichita Falls, Tex., died at his summer home in Alexandria, Minn., July 10 of a heart attack.

JOHN WILLIAM ROY CRAWFORD, former vice president of Standard Oil Co. in charge of its natural gas operations, died at his home in New Rochelle, N. Y., July 6. He joined the company after graduation from college and after partition he became president of Union Oil Co. of Delaware. He retired from active business life in the early 1920s. One of two surviving sons, John W. R. Crawford, Jr., resides in Tulsa.

DR. DONALD C. BARTON, 50, director of the geophysical research department, Humble Oil & Refining Co., and nationally known geologist and geophysicist, Houston, Tex., died July 8, from pneumonia. He was one of the pioneers in the use of the torsion balance in oil exploration, going to Europe in 1920 to study the instrument. Prior to becoming associated with Humble Oil & Refining Co. in 1934, Doctor Barton was engaged as a consulting geophysicist and geologist from 1927. Previously he had been associated with Rycade Oil Corp. and Rydale Oil Co. He was the author of numerous geological and geophysical papers and active in the American Association of Petroleum Geologists of which he was president last year. He also was a member of the American Institute of Mining and Metallurgical Engineers, and Houston Geological Society, of which he was one of the early presidents. He was born in Stow, Mass.; was a graduate of Cambridge School, and of Harvard University, class of 1911.

WILLARD LEO BOROUGH, 55, general superintendent of General Petroleum Corp., died at Los Angeles last week. He was born in Kansas, Ohio, July 11, 1883, and went to work in the fields in Ohio at 13. He removed to Los Angeles in 1910 and become associated with General Petroleum in 1912.

ROBIN A. ELLIOTT, 41, vice president of the F. H. E. Oil Co., which operated chiefly in East Texas, died at Fort Worth, Tex., July 7.

J. WALLACE GEHRKEN, 60, general manager of the Monroe Co-operative Oil Co. since 1924, and previously associated with Standard Oil Co., died recently at Monroe, Mich.

JOHN J. LANTZ, 83, pioneer retired Tulsa oil man, died July 6. A native of Pennsboro, Pa., he entered the oil business in West Virginia in 1886. He was active there in oil development until he moved to Tulsa in 1907. He retired in 1918.

HORACE B. SETZLER, 69, who retired two months ago as superintendent of the National refinery, died last week at Coffeyville, Kans. He had been superintendent of the refinery for 30 years. From 1901 until 1904 he was chemist and assistant superintendent of the Gulf Refining Co., Port Arthur, Tex., and later superintendent of the Lake Carriers Oil Co., Coraopolis, Pa., until 1908. After a year as superintendent of the National refinery at Findlay, Ohio, he moved to Coffeyville. From 1910 to 1914 he was a director of the National Refining Co.

Humble Oil & Refining Co. Wins Suit Over Lease

HOUSTON, Tex.—A verdict in favor of Humble Oil & Refining Co. was returned in District Court here in the suit of Joseph Gruy of Jim Hogg County, in behalf of his three minor sons, asking $1,417,500 damages for alleged failure of the company to develop with reasonable diligence their properties held under lease by that company. Properties involved consisted of 10,800 acres of the Solo ranch in Duval County. The court held that although the property may not have been completely developed, the plaintiffs had not been damaged.

TIME TO GET READY

Here are some facts:

New car sales in 1938 fell 1,845,631 below 1937 while 1,600,000 more old cars stayed on the road

—AMERICAN PETROLEUM INSTITUTE BULLETIN, *June 12, 1939*

Average octane rating of regular and premium grade gasoline in 1938 went up 1 number over 1937—third grade went up 10 numbers

—OIL AND GAS JOURNAL, *June 8, 1939*

Here is a question:

If the octane race goes on while so many old cars (low compression) are running, where will you be when those old cars go to the junk pile and new ones take their places—unless you have Dubbscracking?

Old cars may run on low octane gasoline—new ones won't

Here's a suggestion:

Dubbscracking is the way to make high octane gasoline for new cars—and old ones too U O P catalytic poly units step up yield and boost quality still more

Better get ready now

Universal Oil Products Co
Chicago, Illinois

Dubbs Cracking Process
Owner and Licensor

PROGRAMS AND MEETINGS

Interstate Oil Compact Addresses Announced

AUSTIN, Tex.—Chairman E. O. Thompson announced two addresses to be delivered at the meeting of the Interstate Oil Compact Commission to be held at Santa Fe, N. M., July 19-20.

Gov. Leon Phillips of Oklahoma will discuss the relation of states to regulation through compacts.

State Senator Clint Small of Amarillo, Tex., will speak on gas legislation and the necessity for statutory authorities that will control drainage of gas from one lease to another.

Membership Increases in Industry's 25-Year Club

Twelve more oil men have been added to the membership of the petroleum industry's Twenty-five Year Club, which plans to convene during the annual meeting of the American Petroleum Institute in Chicago, November 13 to 17, next. The new members, as announced by R. A. Wotowitch, Cities Service Oil Co., New York, founder of the club, are:

C. M. Larson, Sinclair Refining Co., New York; Lloyd Lockridge, Sinclair Refining Co., New York; C. C. Stoll, Stoll Oil Refining Co., Louisville, Ky.; Harry P. Dunn, Harry P. Dunn Co., Chicago; A. A. Lacazette, Standard Oil Co. of New Jersey, New York; Fred Ficken, Standard Oil Co. of New Jersey, New York; C. B. Watson, Pure Oil Co., Chicago; Walter J. Curley, Conley Tank Car Co., Pittsburgh, Pa.; A. Caemmerer, Standard Oil Co. of New Jersey, New York; F. E. Spencer, Spencer Petroleum Co., Chicago; Walter McKee, Guarantee Oil & Coal Co., Indianapolis, Ind.; John S. Wilbert, Petroleum Products Co., Chicago, and Fred J. Wolfe, Anglo American Oil Co., Ltd., London, England.

Mr. Wotowitch is preparing the program for the first meeting of the club, membership of which now totals 126.

Petroleum Exposition Has Portfolio for Ambassadors

Thomas B. Tate, newly appointed assistant manager, left, and William B. Way, general manager of the International Petroleum Exposition, look over the portfolio which the exposition is presenting to the ambassadors of the oil-producing nations of the world at Washington, inviting their governments to exhibit at the May 18 to 25, 1940, oil show in Tulsa. Leslie Brooks, publicity director, is in Washington this week personally presenting the invitations which are bound in royal purple velveteen and imprinted in gold. A special volume has been prepared for each nation, pointing out that the show is planning a new international building to house exhibits from foreign nations and to serve as the headquarters for the oil-producing nations. Fifteen by 18-in. photographs of the exposition and the resolution passed by Congress authorizing the United States Department of State to invite the states of the union and foreign nations to participate in the exposition are included.

Attending Safety Meetings Not Working Time

WASHINGTON, D. C., July 10.—Time voluntarily spent in attending safety meetings after working hours and as part of a general safety program sponsored or approved by a governmental agency such as the Bureau of Mines or by a recognized independent organization engaged primarily in safety information dissemination, will not, as a general rule, be considered as working time under the Fair Labor Standards Act, Administrator Elmer F. Andrews of the Wage and Hour Division, pointed out today:

"You will note that paragraph 15 contains two tests: (1) whether attendance is voluntary and (2) whether the meeting or lecture is directly 'related to the employe's work.' In our opinion safety meetings which take place after working hours and are conducted as part of a general safety program which is sponsored or approved by a governmental agency or by any recognized independent organization engaged primarily in disseminating safety information, will not ordinarily be directly 'related to the employe's work' and, if attendance is voluntary, will not be considered as 'hours worked.'"

MAGNETIC STORM

TUCSON, Ariz., July 6.—A severe storm began July 4 at 8 a.m. and ended July 6 at 4 a.m. central standard time.

CALENDAR OF EVENTS

July

AMERICAN SOCIETY OF MECHANICAL ENGINEERS, San Francisco, Calif., July 10-15.

AMERICAN INSTITUTE OF MINING AND METALLURGICAL ENGINEERS, regional meeting, San Francisco, Calif., July 10-17.

INTERSTATE OIL COMPACT COMMISSION, Santa Fe, N. M., July 19-20.

AMERICAN SOCIETY FOR TESTING MATERIALS, San Francisco, Calif., July 23-30.

August

MICHIGAN OIL AND GAS EXPOSITION, Mount Pleasant, Mich., August 1-6.

KANSAS GEOLOGICAL SOCIETY, thirteenth annual field conference, jointly with Illinois and Missouri state surveys and Illinois Geological Society, in southern Illinois and eastern Missouri—August 30-September 3.

September

AMERICAN SOCIETY OF MECHANICAL ENGINEERS, New York, September 4-8.

OIL WORKERS INTERNATIONAL UNION, Hammond, Ind., September 5.

AMERICAN CHEMICAL SOCIETY, Boston, Mass., September 11-15.

MONTANA NATIONAL BITUMINOUS CONFERENCE, Sun Valley, Idaho, September 11-14.

NATIONAL PETROLEUM ASSOCIATION, thirty-seventh annual meeting, Hotel Traymore, Atlantic City, N. J., September 13-15.

October

AMERICAN INSTITUTE OF MINING AND METALLURGICAL ENGINEERS, Petroleum Division, Galveston, Tex., October 4-6.

TEXAS DIVISION, MID-CONTINENT OIL AND GAS ASSOCIATION, twentieth annual meeting, Houston, Tex., Oct. 5.

TEXAS MID-CONTINENT OIL AND GAS ASSOCIATION meeting, Houston, Tex., October 5-7.

AMERICAN GAS ASSOCIATION, annual convention, New York, October 9-10.

NATIONAL TAX CONFERENCE, Palace Hotel, San Francisco, Calif, October 16.

FORTIETH ANNUAL NATIONAL AUTOMOBILE SHOW, Grand Central Palace, New York, October 16.

NATIONAL SAFETY CONGRESS AND EXPOSITION, Chalfonte Haddon Hall, Atlantic City, N. J., October 16-20.

INDEPENDENT PETROLEUM ASSOCIATION OF AMERICA, tenth annual meeting, Fort Worth, Tex., October 18-20.

AMERICAN INSTITUTE OF MINING AND METALLURGICAL ENGINEERS, Petroleum Division, Los Angeles, Calif., October 19-20.

November

SOCIETY OF AUTOMOTIVE ENGINEERS, fuels and lubricants meeting, Mayo Hotel, Tulsa, November 2-3.

NATIONAL MOTOR TRUCK SHOW, Navy pier, Chicago, November 8-16.

AMERICAN PETROLEUM INSTITUTE, twentieth annual meeting, Stevens Hotel, Chicago, November 13-17.

AMERICAN INSTITUTE OF CHEMICAL ENGINEERS, Providence, R. I., November 15-17.

December

WEST CENTRAL TEXAS OIL AND GAS ASSOCIATION, Abilene, Tex., December.

AMERICAN SOCIETY OF MECHANICAL ENGINEERS, Philadelphia, Pa., December 4-7.

February 1940

AMERICAN INSTITUTE OF MINING AND METALLURGICAL ENGINEERS, New York, February 12-15.

April

AMERICAN ASSOCIATION OF PETROLEUM GEOLOGISTS, twenty-fifth annual meeting, Stevens Hotel, Chicago, April 10-12.

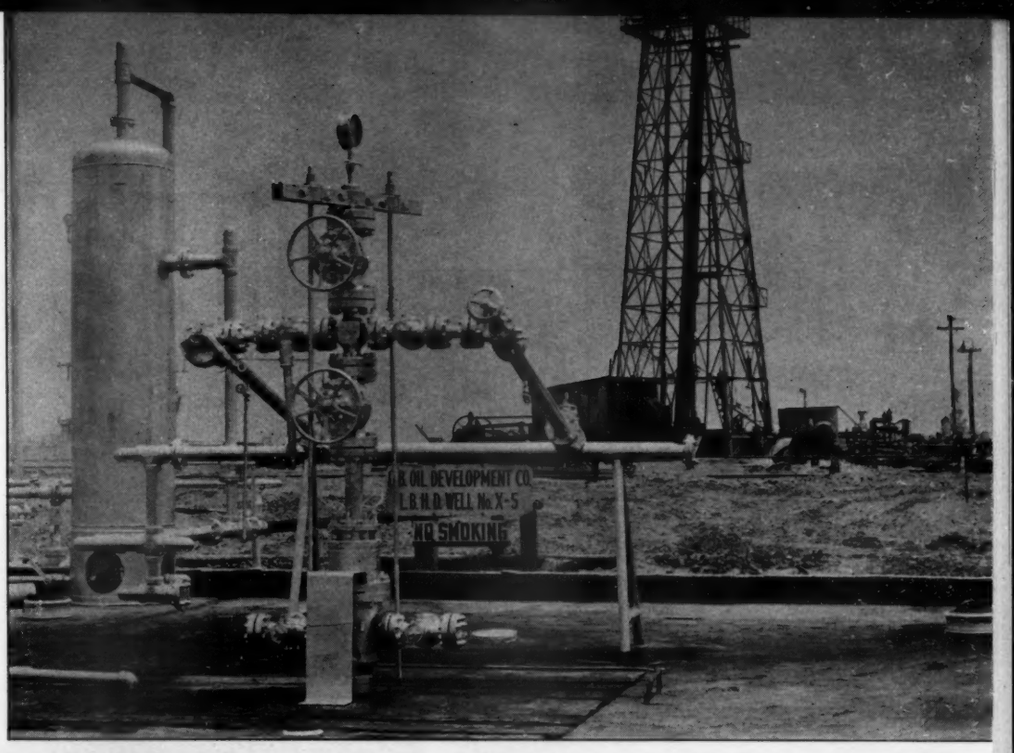
AMERICAN PETROLEUM INSTITUTE, EASTERN DISTRICT, Division of Production, Columbus, Ohio, April 11-12.

May

INTERNATIONAL PETROLEUM EXPOSITION, Tulsa, May 18-25.

June

THIRD WORLD PETROLEUM CONGRESS, Berlin, Germany, June 9-15.



Part of a man-made oil field. California does not permit drilling offshore so dredges pumped sand from the bottom of Long Beach to add a little more area to California and thereby provided land on which could be drilled the wells now constituting the Long Beach Harbor field. A typical well hook-up is shown here. Tubing pressures approximate 1,500 lb. and casing pressures range up to 1,800 lb. Gaging is eliminated as meters measure the oil between separators and tank battery

ENGINEERING & OPERATING

JULY 13, 1939

In This Section

UTILIZE NEW TYPE OF MUD CIRCULATING SYSTEM

By Neil Williams ..... Page 42

A unique mud system perfected by Sun Oil Co. involves elevated steel ditches, degasser and shale-shakers. The result has been lower pumping costs and greater safety for locating and operating equipment under the floor.

PUMPS OBTAIN LARGE VOLUME OF OKLAHOMA CITY OIL

By Harry F. Simons ..... Page 44

Many types of pumping devices are in use in the Oklahoma City field, as its operators pursue their high-recovery program. This article, the second and final in a series, describes the equipment, and hazards a prediction as to what the future holds for the field.

DRILLING TIME DATA IN ROTARY PRACTICE

By T. C. Heistand ..... Page 55

The modern practice of drilling with rotaries according to speed of penetration has been found economical in many fields. In this article the author suggests records and methods for promoting the desired correlation.

VALVE-SEAT PULLER IS DEVELOPED BY GULF PIPE LINE

By Paul Reed ..... Page 65

Many pipe liners at one time or another have devised valve-seat pullers, with varying degrees of success. The one described in this article has proved particularly well adapted to the requirements of the pulling operation.

VISCOSITY OF GASES HANDLED IN DISTILLATE PLANTS

By W. L. Nelson ..... Page 50

OPERATING IDEAS ..... Page 54

SAFETY—SAFETY LINE HOOK-UP FOR STABBING BOARD ..... Page 66

QUESTIONS ON TECHNOLOGY—By C. K. Francis, Ph.D. ..... Page 67

General view from derrick floor of mud tank installation at Labelle showing portion of elevated steel mud ditch at right with degasser unit hookup in right foreground. Mud reclamation settling tank is seen in background on level with mud house floor. Mud reserve pits at right

Utilize New Type Circulating

By NEIL WILLIAMS

Increased efficiency in mud pump operation, greater flexibility in conditioning and control of drilling fluid with maximum protection against contamination, and substantial savings in expenditures for mud and weighting materials are being effected by a new mud system being used by Sun Oil Co. for drilling deep, high-pressure tests on the Gulf Coast. Three installations already are in operation. These are at Labelle, Jefferson County; Palacios, Matagorda County, and Old Ocean, Brazoria County, in which fields some of the highest pressures yet encountered on the Gulf Coast have been recorded, and where use of the new mud system is especially advantageous.

The new mud system, embodying gravity flow of the drilling fluid to pump suction, necessitates elevation of the derrick floor to accommodate the greater height needed for the mud return line from the well to the ditch. This provides an added advantage of increased clearance and working space under the floor, facilitating installation of the large drilling and blowout preventer assemblies being used in controlling of deep, high-pressure wells.

Worth-While Savings Effected

Reduction in expenditures for drilling muds and weighting materials are the result of provisions for reclamation and conservation of these mud materials and elimination of losses incurred by leakage or contamination of the mud. Typical of the savings made in mud material requirements are those at Labelle, where previously expenditures for mud materials have run as high as $75,000 for a single well, as compared with about $10,000 at present.

Gravity flow of the drilling mud to pump suction, as embodied in the new system, lightens pump duty in building up pressures and maintaining circulation. This is reflected in lower operating costs, including reduced steam requirements and consequent economies in fuel consumption. Effective and efficient utilization minimizes the amount of equipment necessary for the same service.

To make possible the gravity-flow of the mud to the pumps, steel tanks are set aboveground to replace the conventional excavated pits. With pump suction off the bottoms of these tanks, there is a constant head feed.

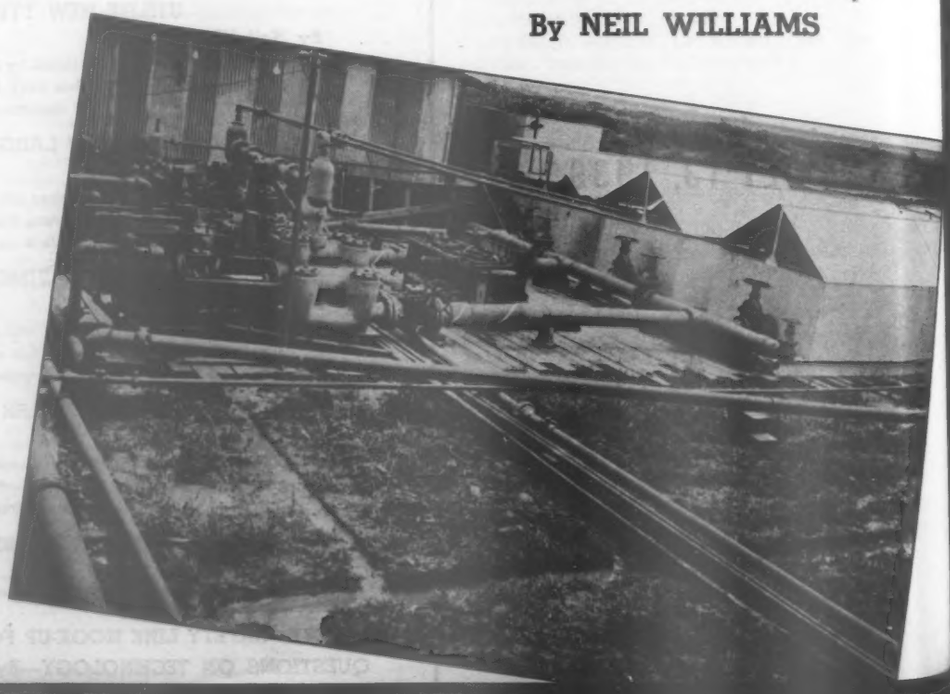
Three of these tanks, set in a row, are so connected that the overflow from any one of them can be run by gravity over the top to either of the other two. The mud ditch from the well links all three so that the mud can be run to any or all of them. In the same way, the outlet lines off the bottom are so manifolded that mud from any or all of them can be fed to either or both of the two mud pumps as desired. This hook-up allows a maximum flexibility in operation, a feature that facilitates control of the well in an emergency.

In normal operation, two of the tanks are in service at a time, one serving as a first settling tank, with the mud passing from this to the second tank, from which pump suction is taken. Use of the tanks is rotated so that the tanks in turn can be emptied and cleaned, as needed. In emptying, the accumulated mud is jetted to a fourth tank, in which desired mud and weighting materials are allowed to settle out, later, to be reclaimed. From here the mud materials can be run to reserve mud pits, or returned to the system as needed. This fourth, or settling reclamation tank, is set up on a platform above the level of the three pumps to facilitate return of the accumulated mud to the system when needed.

From the mud and chemical house, built up on a level with the top of and adjacent to the tanks, mud materials and chemicals can be fed easily and directly to any of the three tanks for mixing. Also the mud mixing pump has direct connection with each of the tanks so that mud can be mixed in any of them as desired.

Each of the three tanks in the circulating system is 20 ft. long, 8 ft. wide and 4 ft. deep, covered with a gable type top having raisable hinged sections. The top, closed in bad weather or rains, protects the mud in the tanks from outside contamination. Built on skids, each tank constitutes a portable unit, to be moved intact from one location to another. The mud settling and reclamation tank is 18 ft. long, 7 ft. wide, and 4 ft. deep, and open.

Use of these portable tanks enables the com-



Close-up of mud pump and tank installation at Labelle showing suction line manifold providing for gravity flow of drilling mud to pumps. Mud and chemical house are seen in background with mixing pump in extreme left corner. Mud reclamation settling tank is in rear on elevation above mud-suction tanks

pany to effect savings in time and costs in setting up for each well, eliminating the need for digging or providing other mud pits for each location. Elimination of the earthen pits also is an item in reduction of mud material loss, and in making possible more perfect and effective conditioning of mud to meet desired specifications. Seepage of mud has been one of the contributing factors in mud losses. Also, with earthen pits, there is a certain amount of contamination of the drilling fluid, particularly where the ground level is low and subject to inundation and the soil soggy as at Labelle, Old Ocean, and Palacios. With steel tanks above the ground there is no chance of water or surface contamination getting into the drilling fluid.

In the rig setup for the new mud system, a 14-ft. substructure is used. Due to the fact the mud tanks are aboveground, the mud ditch must be elevated accordingly, necessitating raising the height of the mud return line from the well. For such installations, the blowout preventer assemblies are set up out of the cellars, casing being extended to the top of the cellar for this purpose.

Upper portion of elevated steel mud ditch at return line discharge, showing steel walkway extending alongside of ditch. Shale shakers (partly visible) are shown at right with degasser unit hookup at top

# of Mud System

In addition to facilitating operation of the mud system, this makes connections, fittings and control valves on the preventers more accessible. Special jacks have been devised to support the blowout preventers so that the weight does not rest on the casing. Cellars are of concrete as in other installations.

The 14-ft. substructures are of steel construction, consisting of regular 10-ft. substructures set up on 4-ft. legs. Engine foundations are elevated accordingly and are of similar construction.

Features of Equipment

Because of the depths drilled and the exceptionally high pressures encountered, rigs used by Sun Oil Co. in the three fields mentioned include some of the largest and heaviest types of equipment available. In their setup every precaution and safeguard considered necessary for the successful drilling and completion of these wells is provided. Mud conditioning has been and is one of the most important phases of this company's operations.

The mud conditioning system includes two vibrating screens for removal of shale particles and other undesirable mud materials, and a degasser unit, through which returns from the well pass in their course to the mud tanks. Bypasses permit direction of the fluid around either of the shakers or the degasser. The mud ditch, like the tanks, is of steel construction, elevated on steel supports, and demountable in sectional units for moving. A steel walkway extends along the ditch the entire length.

Blowout preventers making up the drilling assembly are of the pressure-operated type. Pressure-operated controls are located on an extension platform off the derrick floor, easily accessible. Return lines are provided with a choke installation for application of back-pressure on the well in emergencies. Choke controls are located, along with the preventer pressure controls, on the derrick floor extension platform.

The mud-pump installation includes two 20-in. pumps, mounted in front of the three mud tanks, their suction lines, as previously described, taking feed through a manifold hook-up with the outlets from the bottoms of the tanks. An additional 18-in. pump is provided for mixing mud.

At Labelle, in which Sun Oil Co. is the sole operator, bottom-hole pressures up to 7,300 lb. have been recorded at depths below 8,000 ft. At Palacios, this company has controlled surface pressure above 6,300 lb., this being done in a completion several months ago of a distillate well in a 9,200-ft. horizon. Pressures at Old Ocean, producing from a 10,000-ft. horizon, run between 5,000 and 6,000 lb.

Drilling hookup and blowout preventer assembly at Labelle showing elevated substructure to accommodate increased height of hookup. Preventers are set up out of the cellar with special jacks (partially visible) to support weight of assembly

Pumps Obtain Large Volume of Oklahoma City Oil

By HARRY F. SIMONS

This is the second of a series of two articles reviewing the history and venturing a prediction of the future of the Oklahoma City field. A map on the second page of the article shows recovery up to the present by quarter sections. The initial article of this series was published in last week's issue.

THE surface pressures, of around 2,500 lb. in the early life of the Oklahoma City field, are now reduced to practically nothing. The water problem is not as great in the Wilcox zone as it was in the Simpson and the Arbuckle zones, particularly on those properties that were reasonably produced.

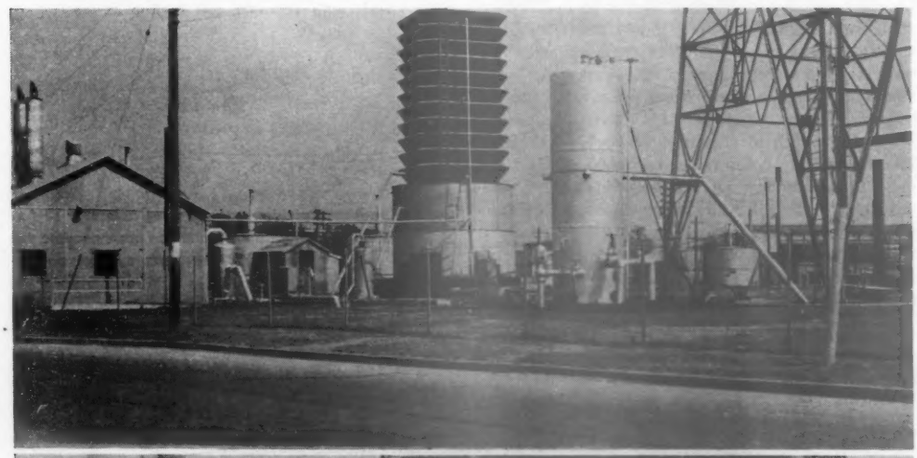
The encroachment during the past two years has not been enough to cause any alarm; some credit this to the removal of the water by edge wells in the Wilcox and the other formations. The water production from the Wilcox has been kept below 5 per cent of the production from the zone which gives some basis for the contention that it is edge water and not a water drive such as exists in the Arbuckle formation. This also accounts for the low fluid levels in the lower Simpson and the Wilcox compared to the high fluid level in the Arbuckle.

While abandonment of some of the wells in the field has been due to an exhaustion of the reserve, many wells have been plugged for other reasons, the main ones being the high cost of keeping the wells on production through workover jobs, the expense of lifting large volumes of fluid in wells being flooded by water, and the difficulty of keeping the rods and tubing in a workable condition due to the crooked holes.

The abandonment of wells has led to sharp declines in the field's potential as well as the number of producing wells. One factor which will influence any estimate of the number of wells which the operators will be able to keep on production is that most of the "bad" wells have already been eliminated and those remaining are the ones least difficult to keep in producing condition.

Practically every type of pumping device is in use or has been tried in the Oklahoma City field in the effort to obtain uninterrupted production. While the beam type of pump is the most common, it has been refined to its highest point for this deep pumping. Longer strokes, fewer strokes per minute, and as nearly straight line travel of the polish rod as is possible are incorporated in the design. Counterbalancing has also been improved and all of the companies keep men that make dynamometer tests to prevent rod-snap. The beam pumps are particularly suitable to the pumping of wells that have a low fluid level. In addition to the beam type pumps there are other devices used which utilize air, gas, or fluid operated cylinder to lift the rods and plunger. Another method uses a reciprocating engine direct-connected to a double-acting reciprocating pump in the bottom of the hole. A motor or internal combustion engine is used to drive a triplex pump on the surface to force oil down a macaroni string for operation of the bottom-hole engine. Some operators of wells making high percentages of water have installed casing pumps operated by various types of surface equipment. These pumps have a large fluid capacity. Plunger lifts and other devices have been used extensively.

At the present time there are more than 140 submergible electrical centrifugal pumps in operation in wells in the field. They are particularly adapted to the handling of large volumes of fluid and have been widely used for wells that make high volumes of water as well as prolific pro-



Top—A complete setup for extraction of the gasoline and the reinjection of the gas on one lease within the city limits. Middle—This well, one of the best producers in the field at the present time, is produced by a combination gas-lift and electrical submergible centrifugal pump. Below—Pulling the 7-in. casing from a well preparatory to plugging back to one of the shallow sands

ducers of clean oil. An especially successful method has been the use of the combination centrifugal pump and gas lift, the pump lifting the oil to about 4,000 ft. and gas carrying it the remainder of the way. Selection of lifting equipment is not only dependent on the amount of fluid to be handled, but on other conditions as well. The rodless type pump was introduced particularly to eliminate the high rod costs on wells that are very crooked. Some of these holes have sharp curves in them, and it is sometimes impossible to get the necessary machinery to bottom, further limiting the possibilities.

Most companies take test sections from each new string of rods for examination in their own laboratories. Failure in the rod string can then be checked with the original tests to determine whether the failure was due to a metallurgical or mechanical defect.

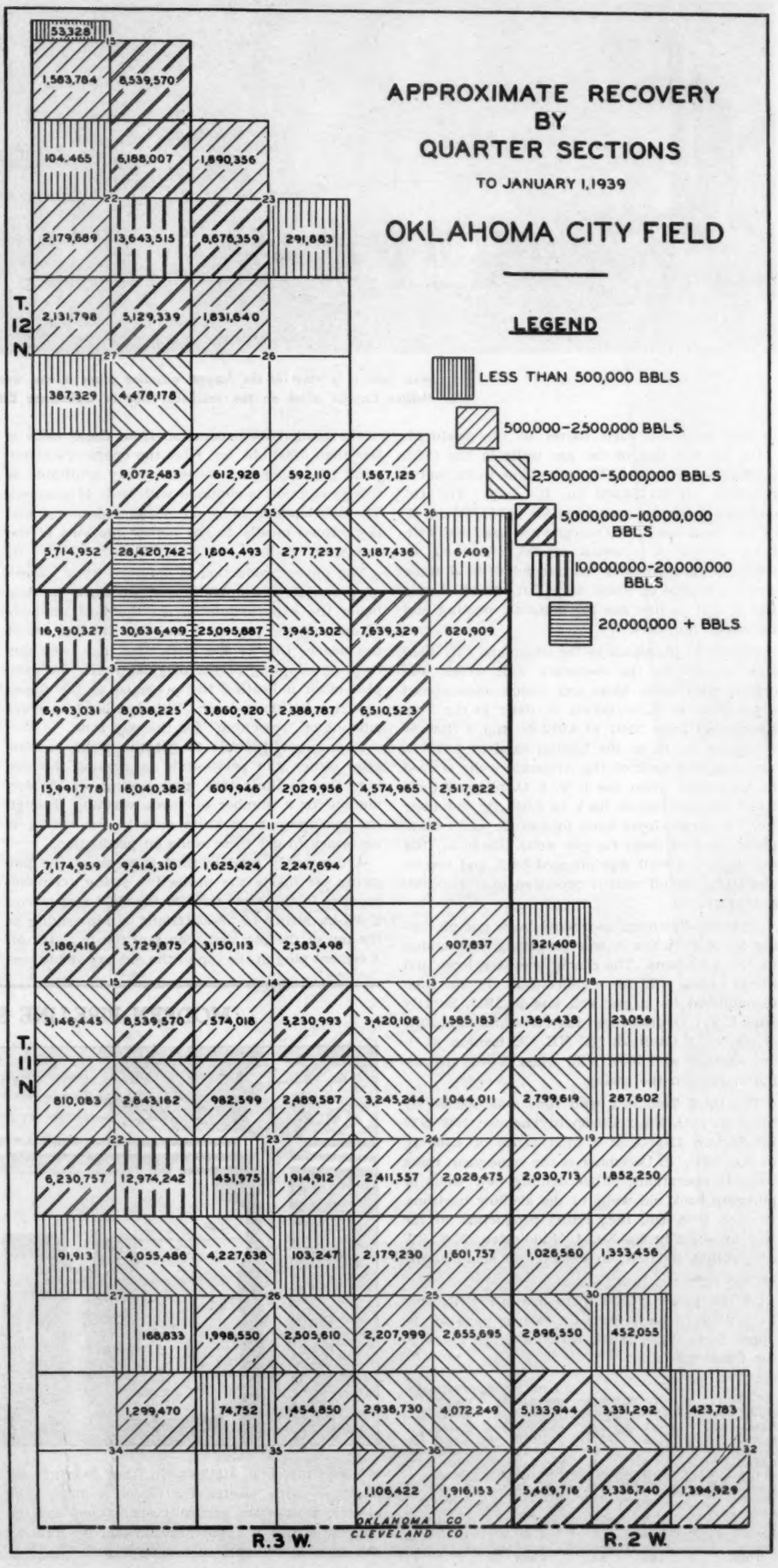
Success of pumping the Oklahoma City field has exceeded even the most optimistic expectations of 7 and 8 years ago. The difficulties were not nearly so great as those expected by the production men. At a cost of $12,000 to $15,000, pumps began to be installed on wells as early as 1932, but it was not until 1934 that the gas-lift systems, installed at a total cost of approximately $13,400,000, began to be ineffective. While there are still a few wells being produced by straight gas lift, most of the remaining units are used in conjunction with various pumps or are used intermittently with time being allowed for build-up of the fluid level. Several plants have been entirely or partially dismantled; the equipment from one plant being shipped to the Illinois basin. Plants that are still intact are running at one-fourth to three-fourths capacity. Lifting costs range from 8 to 50 cents per barrel with the average being about 27 cents.

The gas-lift systems include the gasoline plants which have played an important economic role in Oklahoma City. Returns from this product was in the neighborhood of $23,400,000 on January 1 of this year. The wet gas is taken from the separators or well head, stripped of its gasoline in the gasoline plants, compressed and returned to the lease. The lease operator uses the gas as he desires with some of them burning it or blowing it into the air, and others recompressing it for injection purposes. At the present time the production of gas naturally is not enough for requirements and some operators are applying vacuum to the wells to increase the gas production. This subject has been the cause of much discussion among operators in the field with about an equal division for and against the method. Most of the casinghead gas gathering systems include a vacuum line and the operator has his choice in the matter. A limit of 8 oz. of vacuum has been placed on the wells.

The gasoline yield from the field has averaged 0.722 gal. per 1,000 cu. ft. for the life of the field. There are 14 gasoline plants operating with a total capacity of 586,000 gal. daily. One of these includes an experimental polymerization unit which has increased its capacity about one-third. A list of the plants is as follows:

Name—	Capacity
Coline Gasoline Corp.	25,000
I. T. I. O. (6 plants)	150,000
Peppers Gasoline Co.	35,000
Peppers gasoline Co.	10,000
Phillips Petroleum Co.	20,000
Phillips Petroleum Co.	100,000
Phillips Petroleum Co.	200,000
Sinclair Prairie Oil Co.	36,000
Warren Petroleum Corp.	10,000

They are all of the absorption type and all are operating although much of the gas is coming from the wells plugged back to the Pennsylvanian formations and some of it is coming from the Moore field in northern Cleveland County. Approximately 3,000 cu. ft. of gas has been treated



Seen here is a view of the largest gasoline plant in the world—the Phillips Capitol plant on the southeast side of Oklahoma City field

in the field for each barrel of oil produced.

On the last test of the gas wells in the field, production from the Pennsylvanian wells had a potential of 463,754,000 cu. ft. daily. The Ordovician formation accounted for 14,652,000 cu. ft. of the potential. The Oswego-Prue sand led with 63 wells and a potential of 288,721,000 cu. ft. while the Layton sand was second with 17 wells and a potential of 80,685,000 cu. ft. Much of this gas is sold as dry gas for domestic heating and industrial purposes.

Success of plug-back in the Oklahoma City field was forecast by the discovery well which was drilled with cable tools and which encountered a gas flow of 35,500,000 cu. ft. daily in the Tonkawa sand from 3,997 to 4,012 ft. and a flow of 47,500,000 cu. ft. in the Layton sand at 4,816 ft. The plugging back of the Arbuckle wells started in April 1931 when the I. T. I. O. plugged their No. 1 George Button back to 6,040 ft. and their No. 1 Emerson-Joyce back to 4,020 ft. and recompleted both of them for gas wells. Early in 1932 the discovery well was plugged back and recompleted; as an oil well it produced over 1,000,000 bbl. of oil.

Anderson-Prichard uncovered more gas producing territory when it was preparing to abandon its No. 1 Gibbons. The casing was shot loose and the gas blew wild for a short time. It was then recompleted for a gas well late in 1933. Shortly after I. T. I. O. discovered the Cleveland sand zone at its No. 1 Canfield, NE NE NE Section 27-11-3w, another well blew wild when it was preparing to reclaim the casing.

The third Tonkawa sand zone was opened by the I. T. I. O. No. 2 Elizabeth Theimer, NW NW SE Section 12-11-3, at a total depth of 4,400 ft. in May 1937. In December of the same year, there were 11 operations, either drilling new wells or plugging back old wells to the shallow horizons. In May 1938, Oil, Inc., found production in the Hoover sand in its No. 1 Huddleston, NW SW SE Section 19-11-2w, to extend the shallow producing area.

At the present time there are 104 wells that have plugged back from the deeper pays to the upper formations. Their distribution is given in the following table:

Formation—	No. of wells— Total	Prod.	Daily av. production (bbl.)	Approximate depth (ft.)
Pawhuska	15	13	1,780	3,400
Hoover	34	32	1,620	4,100
Tonkawa	8	3	20	4,600
Layton	5	4	142	4,950-5,175
Oolitic	3	2	160	5,650
Cleveland	20	14	300	5,780
Detrital	4	3	353	6,000
Prue	6	6	132	6,050
Oswego	5	2	5.4	6,100
Lime	4	4	50.5	6,175
Total	104	83	4,563	

The total daily production from these wells is less than 5,000 bbl. but from the operator's standpoint the upper pay zones are very profitable as this production is obtained with little investment. The development is by no means widespread and is confined mostly to the higher portions of the structure.

The upper production is obtained by a variety of procedures, the main cost of work to date being the experimentation in the best methods of opening the pay zone and the shutting off of the water. One of the difficulties has been due to poor sampling of the original wells, the samples often indicating the presence of the upper pay at a fictitious depth. This has led to a great amount of "searching" for the pay zone.

It is often difficult to get the wells to flow after either gun perforating or ripping the casing. Due to the rotary mud sealing off the formation for a number of years, washing through the perforations or knife cuts in the casing is necessary to get these wells on production.

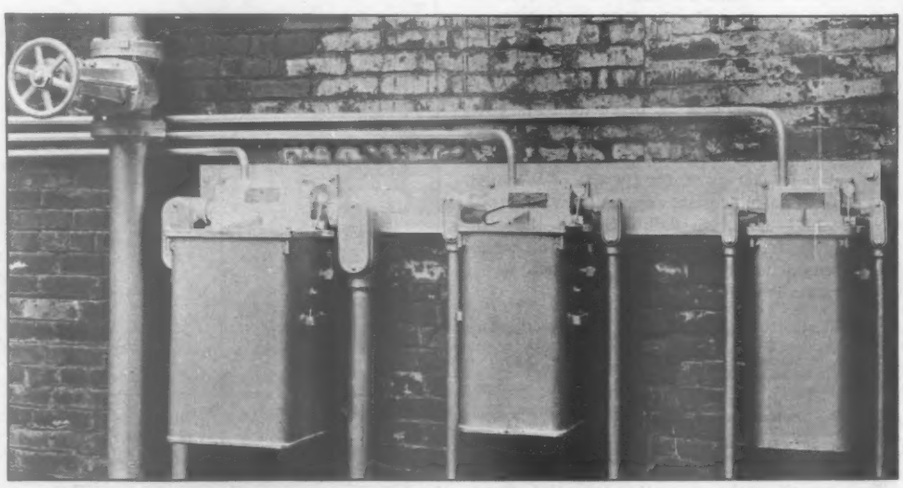
A commonly used method is to shoot the pay string off inside the protective string (common practice in the early days of the field was to run a 9⅝-in. string to 5,500 ft. and a 7-in. string to the top of the pay and then pull the pay string). A cement plug in the top of the old pay string prevents water from entering from below and this procedure makes it possible to go back to the lower hole if it is advisable to do so at a later date. The 9⅝-in. can then be used for a producing string.

The reclaimed casing can be repaired for use in other wells and old tubing and rods can be used for the shallow producer. Most of the old pumping beams and units are moved to fields requiring heavy equipment, and they are replaced with new 10- and 15-hp. pumping units, particularly if the production is being obtained from the Pawhuska, the Hoover, Tonkawa, or Layton sands.

Shutting off of the bottom-hole water in these wells is generally accomplished by simple cementing, but they are often bothered by water coming from formations above. These are generally treated by the squeeze cementing process and frequently this has to be done by the stage method, successive batches of cement being pumped behind the casing under increasing pressures.

The production is not enough to warrant the drilling of new wells to obtain the oil. In the few cases where this has been done, it has not been particularly profitable. The main development of these zones will come after the lower formations are abandoned.

MODERN PIPE-LINE STATION EQUIPMENT



Many pipe-line stations in the country are equipped with electrically driven pumps. The electric motors are generally sparkproof and the danger of fire is further minimized by locating the starting switches at a safe point.

Much of this equipment is automatic, semi-automatic or operated by remote control. Shown here is a typical installation of 440-volt, oil-immersed magnetic full-voltage starters combined with disconnecting breakers at a modern station.

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Viscosity of Gases Handled in Distillate Plants

By W. L. NELSON

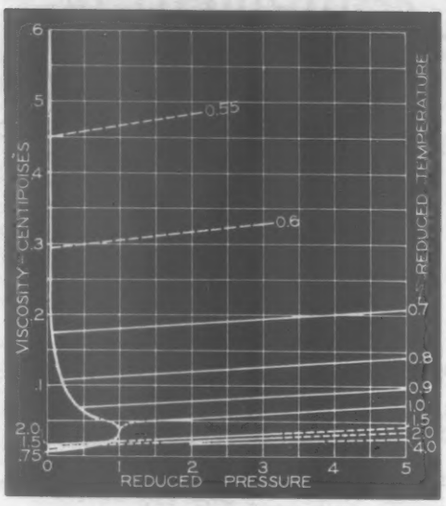
Most discussions of distillate-well plants have centered about the somewhat peculiar phase relationship between liquid and vapor, whereby a liquid is obtained by reduction in pressure. A knowledge of the phase relationship is essential, but the outcome of what has been published to date shows merely that it is necessary to resort to laboratory or commercial experiments to determine the phase-relationship of any particular gas mixture. In other words, no fundamental theoretical rules or empirical correlations have appeared, by which the phase diagram of a gaseous mixture can be computed.

There are, however, other factors in the design of distillate plants, such as the friction loss involved in handling these high-pressure gases, and the heat transfer rates in exchangers for handling such gases. Both of these parts of the design of distillate-plant equipment are vitally dependent upon the viscosity of the high-pressure gas, and the purpose of this paper is to present a correlation of the meager data that are now available on the viscosity of high-pressure gases and of light liquids.

The fact that cannot be wholly appreciated by most plant men is the exceedingly dense gases that are encountered in distillate plants. In many respects these gases behave as much like liquids as like gases and hence it is necessary to revise our preconceived ideas of the properties of a gas and, perhaps, even refrain from referring to the fluids that are handled in distillate plants as gases and simply refer to them as fluids. One customarily thinks of gases as materials which weigh about 0.08 lb. to the cubic foot or at usual high pressures, about 2 or 3 lb. per cubic foot. Compare such densities with weights of 9 to 13 lb. per cubic foot for the fluids handled in a distillate plant operating at a pressure of 2,250 lb. The friction losses involved in handling such fluids are also high, being about 20 per cent greater than those encountered in normal gas systems. Likewise, the usual idea of the transfer rate of gases in heat exchangers is in the range of 2 to 15 B.t.u. per square foot of heating surface, per degree of temperature difference, whereas the transfer rate in distillate plant exchangers is often 50 or may even exceed 100. All of these comparisons point to the fact that the fluids encountered in distillate plants cannot be considered as gases in the ordinary sense, and that special attention must be given to their physical properties.

Viscosity of Gaseous Fluids

The chart shown on this page is a correlation of some of the data now available on the viscosity of the normal paraffin hydrocarbons. References are listed at the end of the article. The Theorem of Corresponding States was employed as a method of comparison. The reduced temperature and reduced pressures that are used on the chart are the actual conditions (absolute units) divided by the critical temperature and critical pressure, respectively. Values of the critical constants for several hydrocarbons are:



Approximate viscosity of hydrocarbon gases and vapors

Material—	Crit. temp. deg. F. abs.	Crit. pressure lb./sq. in. abs.
Methane	344	673
Ethane	550	709
Propane	664	632
Isobutane	733	544
Butane	767	529
Pentane	847	485

For mixtures of hydrocarbons, the weighted mol average values of the critical constants can be used with fair accuracy. As an example in using the chart, the viscosity of propane at 2,220 lb. pressure and at 70° F. (530° F. abs.), will be estimated. The reduced temperature is 530 over 664 or 0.8, and the reduced pressure is 3.5. From the chart, the viscosity is found to be about 0.13 centipoises.

In general, conditions at which the materials will be liquids are on the upper part of the chart, i.e., above the reduced temperature line marked 1.0, whereas the viscosities of gases are near the bottom of the chart and below a reduced temperature of 1.0. Earlier it was stated that high-pressure gases may behave much as liquids behave and this fact is evident in the viscosity chart. The viscosity of liquids decreases with temperature (moving toward higher values of reduced temperature) and the viscosity of low-pressure gases increases with temperature. Both of these effects can be noted on the chart but also note that at high pressures the lines for gases at reduced temperatures of 1.5, 2.0, and 4.0 show that the viscosity of such gases (or fluids) decreases with temperature as you would expect liquids to behave.

The correlation could have been improved greatly if data on the viscosity at the critical point had been available so that reduced viscosity could also have been used in preparing the chart. However, until additional data are available, the chart may be safely used for estimating gas and liquid viscosities. The experimental points fall reasonably accurately about the lines given on the chart. Data on methane, ethane, propane, isobutane, butane, pentane, two natural gases, and several liquid hydrocarbons were used in preparing the chart.

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HOW ALLOY ELEMENTS AFFECT STEEL

Although there are about 92 chemical elements, only about 20 of these are used in the manufacture of alloy and carbon steels. In addition to the widely used elements, the following more rare ones may be of interest: boron, cobalt, columbium, titanium, uranium, and zirconium.

Some are used because of the specific beneficial properties that they impart to steel, while others exert secondary influences during steel manufacture. Certain elements, such as nickel and copper, dissolve in iron and alter the properties of pure iron, whereas most of the other alloying elements, such as chromium, molybdenum, tungsten, etc., combine with carbon to form compounds called carbides.

The effect of each of the elements cannot be directly measured in many instances because of inadequate experimental and plant records, but the general properties of the more common alloy steels are fairly well established and are presented in the following table. The steels (except specials) contain about 0.4 per cent carbon and were each heat-treated to the same general condition.

Tpical steels—	Index of properties, Carbon steel = 100 units: Elasticity	Ductility	Hardness	Distinguishing characteristic
Straight carbon	100	100	100	Strength and workability
Chromium nickel (Cr 0.6, Ni 1.25)	125	94	120	Surface easily hardened
Chromium molybdenum (Cr 0.95, Mo 0.2)	135	94	125	Resists impact, fatigue, and heat
Medium manganese (Mn 1.75)	155	58	138	Strength and workability
Carbon molybdenum (C 0.2, Mo 0.68)	162	53	164	Strength at high temperature
Straight chromium (Cr 0.95)	177	63	147	Strength and workability
Nickel molybdenum (Ni 1.75, Mo 0.35)	177	68	153	Resists fatigue
Manganese molybdenum (Mn 1.3, Mo 0.3)	177	68	151	Resists impact and fatigue
Carbon vanadium (C 0.5, V 0.18)	179	68	153	Resists impact
Nitralloy (Al 1.15, Cr 1.15, Mo 0.2)	187	53	353	Extreme hardness
Nickel chromium molybdenum (Ni 1.75, Cr 0.65, Mo 0.35)	203	63	161	Resists twisting
18-8 stainless (Cr 18.0, Ni 8.0, cold worked)	219	53	165	Resists corrosion
3.5 nickel (C 0.3, Ni 3.5)	224	63	192	Toughness
Silicon manganese (Si 2.0, Mn 0.75)	224	42	180	Springiness
Chromium vanadium (Cr 0.95, V 0.18)	229	52	225	Strength and hardness
High silicon sheet (Si 4.0)	...	...	...	High electrical efficiency
High speed steel (W 18, Cr 4, V 1.0)	...	...	...	Stays hard at red heat
Cobalt magnet steels (Co 35.0)	...	...	...	Retains magnetism

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In the making of alloy steels, the metallurgist has at his command many alloying elements. Nickel makes steel tough. Chromium imparts mineral hardness. Molybdenum promotes depth hardening. Vanadium facilitates grain control. Manganese aids the control of depth hardening. By combining these elements in varying proportions with iron and steel, alloys have been produced with the desirable qualities required for almost every specific use known today.

But research on alloy steels goes on—to find new steels for new uses—better steels for old uses—and less expensive steels that will cut your costs without penalizing the user of the manufactured product.

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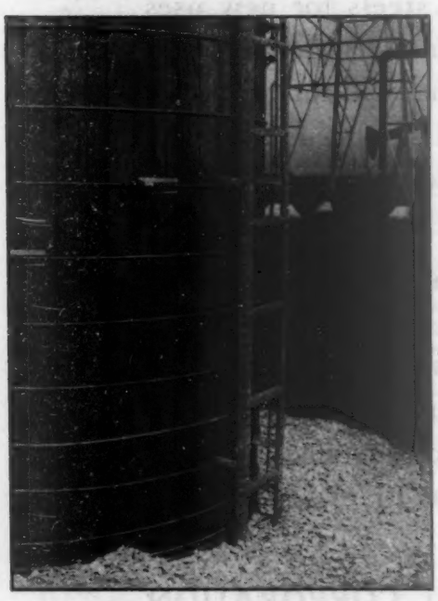
Operating Ideas

Angle Iron Ladder

A light, easily portable, strong service ladder for lease use can be put together quickly with a few sections of perforated tank angles with the use of only a hacksaw and wrench. Steps for the ladder are formed from short sections cut from a length of angle, the cutting being done so as to bring holes in the angle near each end, to permit ready bolting to the uprights. These steps may be spaced as desired, being set close when service requirements impose climbing with heavy loads, or spaced more widely for gaging or inspection purposes alone. The ladder shown is bolted by means of short bracing legs, to insure toe-room, to a wooden



treating tank. The same type of structure, with a hooked top, or with properly spaced hooks, to engage the ring of holes in the overhanging top sheet of a tank, may be carried from tank to tank and used for routine work, for painting and occasional tasks.

Housing Portable Light Plant

In the Griffin field, (Avoca townsite) pool of Jones County, West Central Texas, the welder on one drilling rig fabricated the portable shelter shown here for housing the electrical generating plant. Short pieces of old pipe and tubing were welded together to form the skid, facilitating easy movement, while old pieces of tank steel were cut and welded together to form the shelter. Only the ends of the house were permanently closed, each of the two sides being split so that either one-half or all of the side could be raised for ventilation or inspection.

Draft Box on Stack

A California operator has devised the illustrated steel draft box so that the draft to the boiler can be changed when the wind is too strong. This box is welded to the stack and is controlled from the ground by wire which is connected to the lid, changing the opening or closing it to suit changing wind velocities.

Steel Pump Foundations for Flood Protection

General practice is to install pumping units on concrete foundations but in some cases special arrangements must be made to protect the equipment from flood waters. The installation shown is on a state lease in the Sabine River bed in the East Texas oil field. This river occasionally goes on a rampage and the water level gets high enough to cover a pumping unit when it is set on the ordinary concrete foundation. A special substructure made from I-beams is used for a foundation and the unit installed 10 feet above the ground level. Extensions of the substructure will permit an ample working platform when production crews are pulling rods and tubing. During flood times it is practically impossible to continue operating the unit as the well can only be reached in a boat and the current is quite strong. The internal-combustion engine and the pump gears are, however, protected from damage due to water; in moderately high water, the well can continue pumping. The well was drilled with the machinery and derrick floor slighly higher than the pump platform.

Drilling Time Data in Rotary Practice

By T. C. HIESTAND
Consulting Geologist,
Indian Territory Illuminating Oil Co.

Use of drilling time is not new, but the full use of the method has not been employed until recently. The controlled drilling possible with modern rotary rigs, together with the use of the geolograph, make drilling time records dependable to interpret accurate depths of porous formations on the rig floor. This in turn allows the geologists on drilling wells to recommend proper testing of all zones where oil and gas occur, as penetrated. Drilling time data assist in getting fuller recovery of cores, in avoidance of undue loss of time running on dull bits, and permit the correction for sample lag so that the log of the well checks with electrical and geothermal charts. Six typical well cases are discussed in this article which is the first of a series of two on the subject. The second article will appear in an early issue.

The early cable-tool drilling used "drilling changes" and timing of drilling progress as a means to recognize the penetration of alternating hard and soft formations. However, when rotary drilling was widely adopted field men soon were aware that changes in drilling rates obviously depended on mechanical as well as geological factors. In rotary practice the earliest use of drilling time to interpret relative porosity of the beds penetrated probably came with the closed-pressure operations for "drilling-in." Core-drilling has been guided considerably by use of variations in drilling time per foot, particularly as indication of the time for discontinuing use of the fish-tail bit and for running the core barrel.

Variations in drilling time per foot were used some 10 years ago by numerous geologists in the Seminole district in Oklahoma to make more accurate depth determinations of the top of the Viola limestone and other important beds. David[1] has shown convincingly the importance which West Texas operators attach to the drilling time in a district where the thick salt deposits encountered in wells deteriorates the mud fluid and in turn causes the quality of the rotary samples to be very poor as an average. The method is suited to drilling with oil after the flow string of casing is set. Similar importance is attached by Kansas operators, and their district has both the salt deposits and cavernous limestone zones to upset the return of dependable rotary samples. The recent developments in Illinois have been carried on almost entirely with rotary rigs. Operators there have not used prepared mud extensively in spite of the fact that formations do not yield very good constituents to produce the viscosity to return rotary samples of good quality. Use of drilling time is virtually necessary to obtain an accurate log under these circumstances; the method has become rather universal in that territory even for operations where drilling mud is properly maintained.

Perhaps the two important reasons why the drilling time method was not perfected sooner are that the practice has been inconvenient and there has been a lack of dependability. In recording time, it is necessary to exclude all the hours and minutes consumed in making connections, round trips, etc. There has been a lack of proper rotary equipment to indicate the mechanical variations which would accelerate or retard drilling progress. These factors have been removed in recent months. Marked improvement has come with the introduction of the geolograph, which records the actual drilling time mechanically. Other factors are: maintenance of proper drilling mud; self-lubricating rock bit; leak-proof, full hole drill pipe; the modern, accurate weight indicator; and controlled rotary speed.

For several years operators have assigned geologists to be at the drilling operations to secure accurate geological information as drilling progressed. Drilling time data should be interpreted as operations proceed foot by foot so that the proper testing of the porous formations can be performed; such records are therefore kept from the start to avoid miscorrelations and in search for evidence of unexpected "sands."

Mechanical Vs. Geological Variations

Engineers have been investigating mechanical variations which arise in rotary drilling. The work is indicative that many useful results will be obtained, although those so engaged consider much is to be learned in the future. Instruments very accurate in measuring the weight on the bit are used to avoid accelerating or retarding progress unwittingly; the revolutions per minute of the rotary are observed with the tachometer; and drill pipe torque is measured by means of a hydraulic torque coupling built into the pinion shaft of the rotary table. Alcorn* has demonstrated that by the control of the weight on the bit and the speed of the rotary, a chart of the torque variations tends to correlate with the minute variations of the Schlumberger chart. Hayward† has demonstrated that mud viscosity variations and drilling time changes correlate with geological formations; and has perfected a continuous mud stream sampler to secure samples both at the returns-chute and the intake line to the pumps so that the loss or gain of viscosity is recorded accurately. Such investigations are phases of geophysics beginning with the rotary tools, whereby valuable data is being secured which will confirm information from sample logs, electrical and geothermal charts. The advantages of the data supplied in operations obviously lies in the opportunities afforded the operator to decide immediately at the well what testing of formations is warranted—at no great cost additional to that of the drilling itself.

To interpret drilling time data accurately, proper conditions at the well presuppose that mechanical variations are eliminated to the degree of negligibility. The basic difference in rocks which will retard or accelerate drilling progress have to do with relative hardness and porosity. The rock bit chips the rock, the drilling mud exerts hydraulic action to remove cuttings and to cut clay or water-soluble deposits. Moderate drilling speed in shale which is relatively soft is due to lack of porosity and tendency to create friction. The slow drilling speed in an impervious limestone is due to its relative hardness as well as lack of porosity. A quartzite with its very great hardness and density drills slowest. At the other extreme with a porous, friable sandstone drilling rapidly, the hydraulic action of the mud practically cuts the formation. Porous, leached, vuggy dolomite limestone, even though cherty, and therefore having a certain relative hardness, drills rapidly due to the high porosity.

David[1] mentions that specific drilling time per foot has a direct relation to the porosity of the Permian limestone in the Goldsmith pool, since nearly constant weight on the bit is used by all the operators. Otherwise, specific time cannot be said to be as important as the observation of the greater variations which occur in time records.

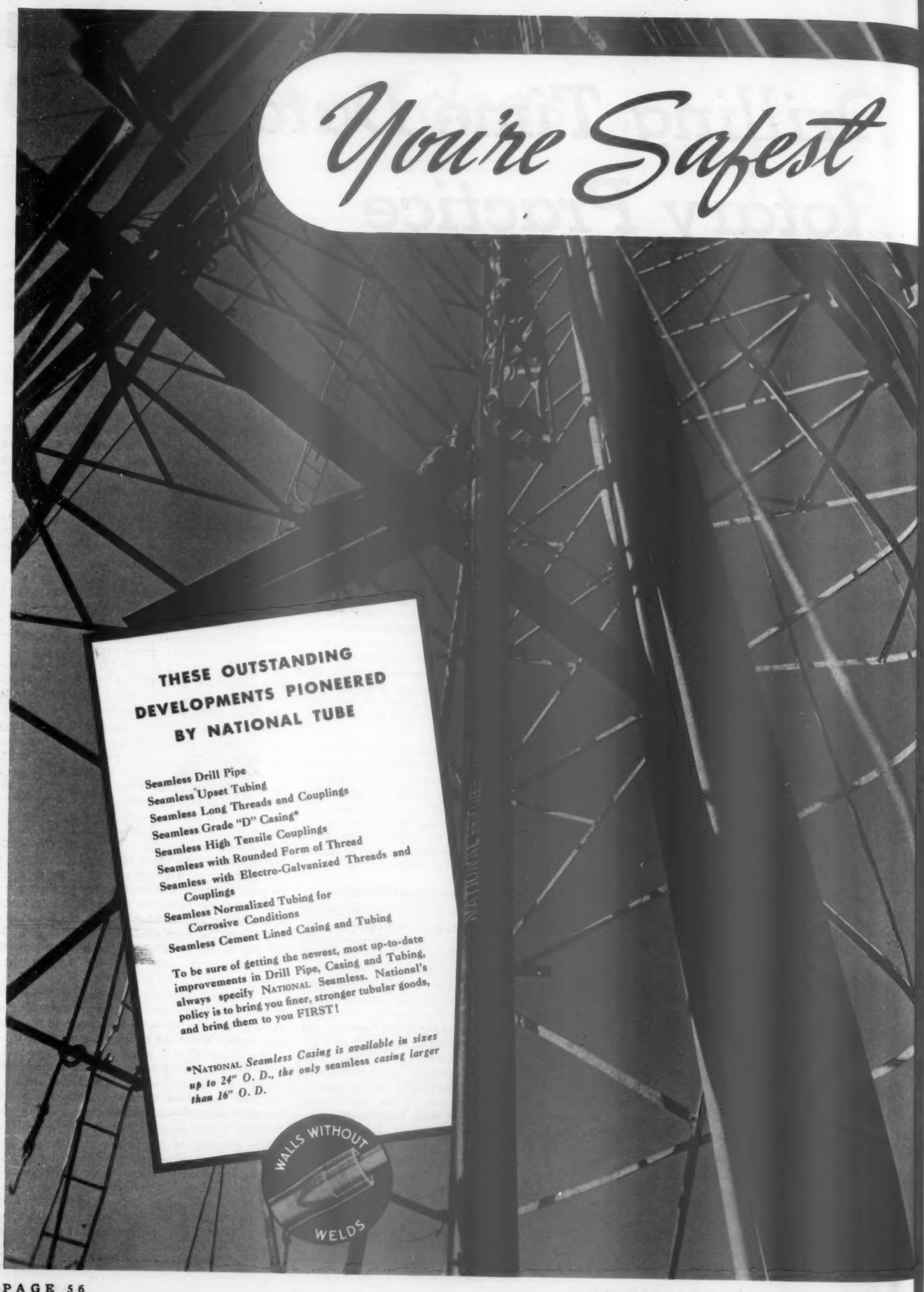
The acute acceleration or retardation of drilling rate marks the depth of a formation change; the geologist at the well examines the cuttings as soon as these have arrived at the surface to learn what the formation change is lithologically and whether any staining or odor of oil and gas is present. The very gradual retardation of drilling rate is due to dulling of the bit as a general rule, particularly since the weight indicator has been used as a guide in drilling.

In cases of operations where the depth reached is several thousand feet the time required for the cuttings to arrive amounts to as much as an hour and longer. When the drilling has accelerated to a rate of less than 5 minutes per foot, the tools have to be raised off bottom and the samples circulated to the surface for examination or else the hole would be deepened too much (even though a fairly thin oil pay), before a decision is reached to core or otherwise test the zone.

The question of the proper units to use has been discussed with geologists located throughout the territories where rotary drilling is carried on. The concensus of opinion is that the proper unit is minutes per foot, recorded foot by foot. The separation of geological from the mechanical factors is thus best accomplished. Furthermore, when a very porous formation is reached the

(Continued on Page 58)

*I. W. Alcorn, Pure Oil Co., Houston, Tex., personal communication.
†J. T. Hayward, Barnsdall Oil Co., Tulsa, oral communication.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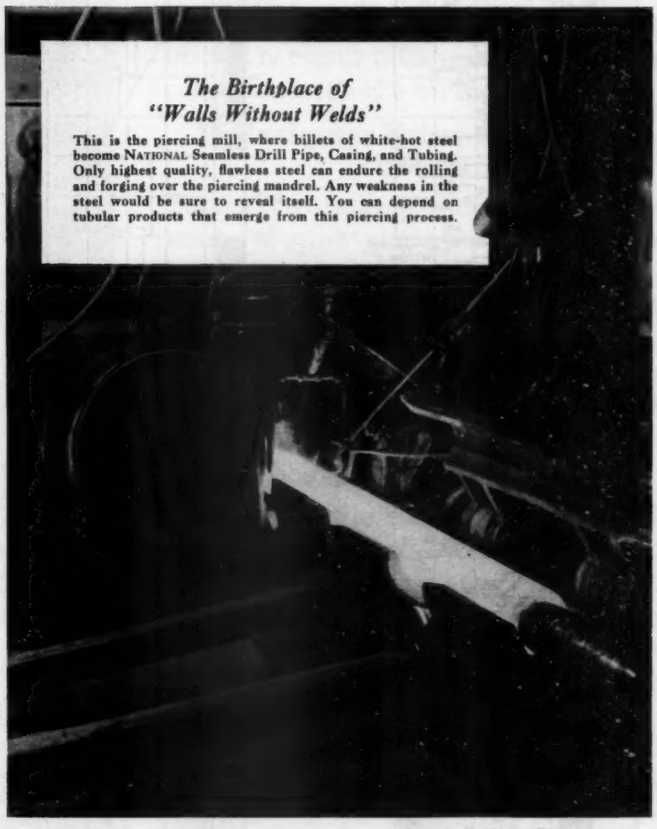

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depth to the foot is needed. To avoid taking unnecessary cores or tests, that is, where only 1 or 2 ft. of soft formation has been penetrated, the hole can be deepened in 1-ft. stages and samples circulated for a sufficient evidence of oil and gas saturation, and thereby be quite certain in making the decision to core or test.

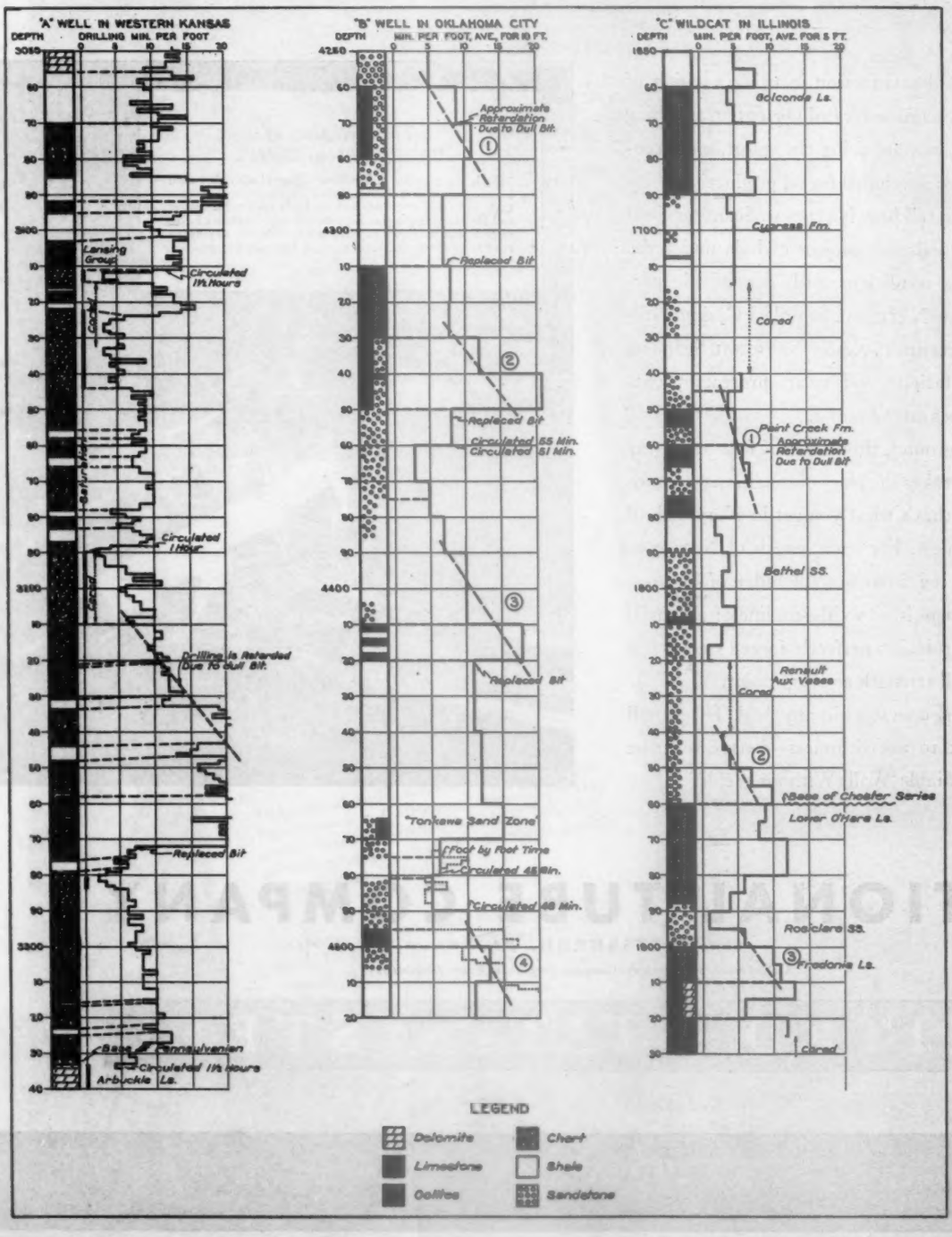
Time Data in Coring Operations

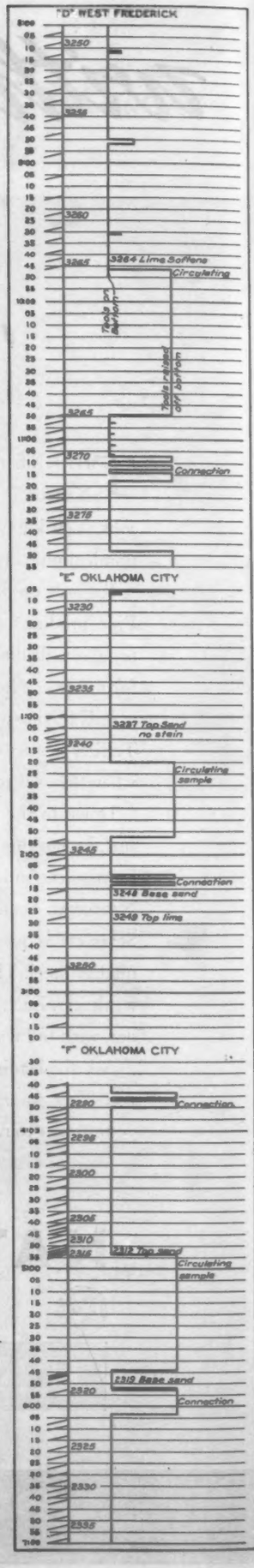
Naturally the specific time per foot for coring operations has no direct relation to full-hole drilling rates. However, the time variations per foot in coring are important in themselves. For example, in the Illinois basin the sandstones of the Chester series have tightly bonded layers alternating with sugary, friable layers; limestone beds of the Ste. Genevieve range from very dense to extremely porous, oolitic and soft. Ordinary coring practice has been very successful for the

(Continued on Page 62)

Fig. 2—(Right) Drilling time logs as recorded on geograph chart, for parts of three wells; D in West Frederick field, southwestern Oklahoma; E and F in Oklahoma City. Chart heading is omitted, also bottom of chart is abbreviated which normally extends to 8 o'clock to cover 12-hour period. Time scale is in minutes, each unit being 5 minutes. Column at left gives time per foot, with depths given each 5 ft. Column at right denotes position of tools while drilling with line nearer time column, and position of tools when raised off bottom with line extended to the right-hand direction. Notes explain shutdown occurrences

Fig. 1—(Below) Conventional drilling time logs of parts of three wells: A in western Kansas; B in Oklahoma City, and C in Central Illinois. Well A has time recorded foot by foot; Well B has time per foot averaged for 10 ft. except foot by foot time given at very bottom, and Well C has time per foot averaged for 5 ft. Vertical scale is in feet; time scale is in minutes per foot drilled. Positions where the bit is dulling is indicated





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dense beds but not for the soft ones. The core barrel having become loaded with the dense material acts as a drilling bit and pulverizes the soft rock which is then carried up by the drilling mud. Mitchell* has kept time foot by foot, while coring. As long as the rate per foot diminishes coring operations are continued; but as soon as the rate accelerates appreciably the coring is stopped, the core extracted, and operations resumed with the emptied barrel. This method has been responsible for practically full recovery of both the hard and very soft layers, even though alternating in occurrence. And if we are to continue to make laboratory tests for permeability, and analyses of saturation to estimate reserves, the first matter of importance is to recover all the producing formation.

Replacement of Dull Bits

The geologist at the well who knows the approximate stratigraphic section to be encountered ahead of the progressive drilling depth of the hole is equipped to recommend the proper times to make round trips to change bits, upon analyzing drilling time data. As previously mentioned, the criterion of the dulling of the bit is the more gradual retardation of the rate of drilling. If the bit has become very dull but the interval to a formation change is estimated to be small, he may choose to continue drilling until the change is reached. If a reasonably long interval of hard formation is expected he may recommend a round trip immediately, and thereby save many hours' time running on the dull bit. Such information has an appreciable economic value to the drilling company, and can be used to show a profit of several hundred dollars per well.

Since the dulling action takes place rather gradually, and is related to the lithology of the section being drilled, this factor does not need to confuse the one who is interpreting drilling time data in terms of geologic changes, and does not lessen the value of foot by foot time records. The specific time is very much affected and is one of the reasons why specific time does not commonly correlate from well to well, inasmuch as the depths where bits are changed may not correspond.

Sample Lag

The time interval for cuttings to travel from the bottom of the hole to the surface has a direct relation to depth. Hayward† has found that the time closely approximates the results of calculating the number of strokes of the mud pumps needed to displace the fluid in the hole divided by the strokes per minute. The lag in terms of finding the depth from which a given sample was penetrated by the drill can be determined approximately by referring the hour and minute the sample is caught to the hour and minute log of the drilling progress. However, the lag can be corrected at the horizons of the formation changes by correlating these with positions of acute acceleration and retardation recorded in drilling time.

Sample lag has not been corrected in the majority of sample logs of rotary wells. In other words the lag is assumed to be practically a constant and where operations are all with rotary tools, the relative structural differences are measurable. Electrical logs have come into prominent use to correct such lag at horizons where casing seats are chosen, or where producing zones are tested or casing is perforated. Drilling time will confirm the electrical logs.

Maddox[3] published the logs of two wells in the Moore field, Cleveland County, Oklahoma, and illustrated the possibilities of the drilling time method. He admitted some improvement was needed to satisfy all the requirements for the geologist on the well so that it might be possible to know precisely what formation was being drilled at all times. Others listed at the end of the paper have likewise indicated ways and means of applying time data to geological conditions, and especially to producing zones.

*J. G. Mitchell, Pure Oil Co., Olney, Ill., oral communication.

†Hayward, op. cit.

Random-Type Wells

In Fig. 1, three wells, *A*, *B*, and *C* are illustrated as more or less random types. The three cases are presented to denote the advantages gained by keeping the true foot-by-foot record as given for well *A*. The average per foot for 5-ft. intervals is used for well *C*, and for 10-ft. intervals is used for well *B*. The lower portion of the log of well *B* contains the actual record for each foot, drawn in the dotted line.

Well *A* is a producer in a typical western Kansas field where oil saturation is found in the Lansing-Kansas City groups as well as in the Arbuckle limestone beneath. Where the saturation is of commercial importance the time per foot rarely exceeds 5 minutes and averages 3 or 4 minutes. In the depth interval between 3,200 and 3,240 ft. the drilling rate is retarded obviously by the bit becoming dull. At 3,272 ft. the fresh bit accelerated the drilling rate from 20 minutes to 7 minutes per foot where the formation drilled was the same in lithology. Forty feet was drilled with the bit very dull and represents a net loss in time to the drilling contractor of 8 hours and 40 minutes.

Well *B* is located at Oklahoma City, which had no saturation although the sand from 4,360 to 4,370 ft. was soft enough to signify possibility of fluids and therefore samples were circulated to determine whether oil saturation was present. The dulling of the bits at the positions labelled 1, 2, 3, and 4, is rather obvious. In this case the bit replacements were made in logical manner. Below the depth of 4,470 ft. the foot-by-foot record is particularly interesting in the manner whereby the details of the tops and bases of shale, sandstone, and limestone layers are delimited.

Well *C* is a wildcat dry hole in Central Illinois. In this case the foot-by-foot time was recorded originally, but unfortunately only the average for 5-ft. intervals was preserved. Schlumberger records were made, and the two methods checked nicely. Of course the microlithology was determined and interpreted along with the drilling time data at the well. In the depth interval between 1,790 and 1,820 ft., medium porosity was indicated by drilling time; and water saturation was shown on the electrical log. The same was likewise true for the interval, 1,890 to 1,900 ft. The dulling of the bits is not as obviously depicted in this well record as in wells *A* and *B*; however, the gradual retardation at positions labeled 1, 2, and 3 surely denotes such occurrences.

In Fig. 2, wells *D*, *E*, and *F* are illustrated on the geolograph chart form and are reproduced from original records. The scale is in units of hours and minutes instead of depth as drawn in Fig. 1. The three wells are given on a single 12-hour form for convenience, while actually the experience of encountering as many porous zones in a few hours' drilling period is not very common. The acceleration or retardation of drilling rates is readily detected from such charts in terms of minutes per foot. The dulling of the bit is not indicated in the examples cited, but such occurrences can be analyzed from the data on the charts where the rate retards gradually.

Well *D*, located in the West Frederick field, Tillman County, Oklahoma, was chosen for an illustration of the record where porosity was encountered in a limestone zone, part of the Canyon series of the Pennsylvanian. Above the depth of 3,260 ft. the rate is 1 ft. in 7 or 8 minutes, 3,260 to 3,263 ft. the rate increases to 1 ft. in 5 minutes, and below 3,263 ft. the rate is 1 ft. in 3 or 4 minutes. The porous zone was confirmed in the electrical log. The tools were raised off bottom and a sample was circulated at 3,265 ft., requiring 1 hour and 3 minutes. No saturation was found and drilling was continued.

Well *E*, located in the Oklahoma City field, serves as an example where a shale was drilled above the depth of 3,237 ft. at a rate of 1 ft. in 8 minutes. Between the depths of 3,237 and 3,248 ft., a soft sandstone was drilled at a rate of 1 ft. in 2 or 3 minutes. Below the depth of 3,249 ft. the rate decreased to 1 ft. in 23 to 24 minutes, while drilling limestone. At 3,243 ft. samples were circulated, no saturation was found, and drilling was resumed.

Well *F*, also located in the Oklahoma City field, exemplifies rapid rates of drilling progress at shallow depths. The rate above the depth of 2,305 ft. is 1 ft. in 3 or 4 minutes while drilling in shale. From 2,305 to 2,318 ft. the rate accelerates to 1 or 2 minutes per foot, and represents a bed of porous sandstone. Samples were circulated at 2,315 ft., no saturation was found, and drilling was resumed. The rate below 2,318 ft. is approximately the same as shown above 2,305 ft.

In each well case mentioned the problem arose concerning whether to core. The drilling was ceased in each instance to examine the sample; had saturation been found coring could have been commenced in good position to make full use of it for studies of permeability and porosity. There have been many operations conducted where cores were taken of shale, after the sandstone had been completely penetrated, but no porous bed should be passed up without obtaining a circulated sample when the foot by foot drilling time is being watched at the well.

Conclusion

This discussion is submitted as an account of progress in recognition of the work of many field men who are responsible for making the rotary method of drilling satisfy requirements of high geological standards, and who are keeping pace with advancements in engineering fields. Detailed knowledge of subsurface stratigraphy should assist the office geologist to gain fuller comprehension of sedimentation and in turn stimulate exploration procedure.

Acknowledgment

Acknowledgment is given of cooperation on the part of geologists of the Indian Territory Illuminating Oil Co., who have contributed data and ideas regarding drilling time records of rotary operations in Colorado, Kansas, Oklahoma, Texas, and Illinois. A list of published articles is appended which was compiled with the aid of the Tulsa Public Library, Technical Department; the U. S. Bureau of Mines Library, Bartlesville; The Oil and Gas Journal; and the Oil Weekly.

List of Publications

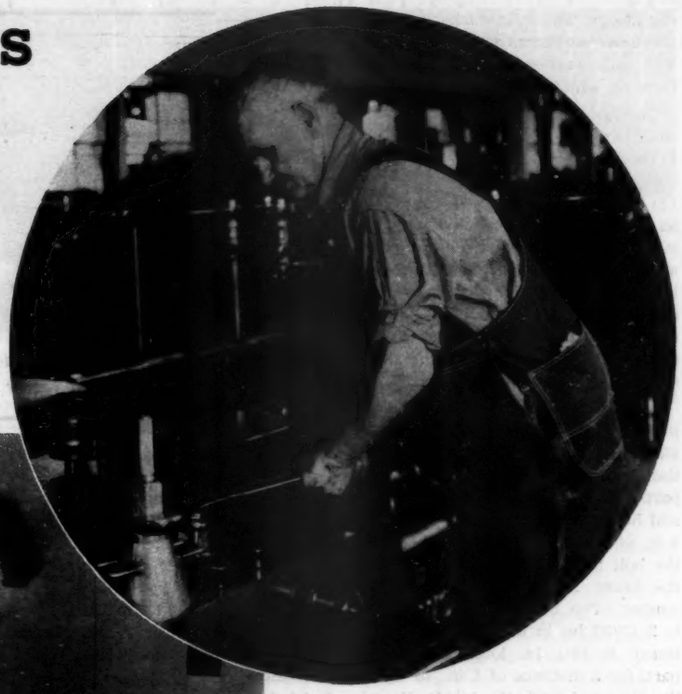
1. Max. David, Use of Drilling Time in Determining Completion Practices—Goldsmith Pool. The Oil and Gas Journal, March 31, 1933, p. 69; Oil Weekly, April 4, 1933, p. 39.
2. P. Gallakov, A Study of Drilling Speeds Used in Russia. Petroleum Engineer, December, 1930, p. 77.
3. G. C. Maddox, Results of Logging Two Wells According to Drilling Speeds. The Oil and Gas Journal, July 1, 1937, p. 36.
4. Brad. Mills, Speed and Weight When Correctly Applied Has Definite Relationship With Drilling Footage. Oil Weekly, July 22, 1935, p. 25.
5. T. P. Sanders, Drilling Time Curves for Analyzing Pay Strata. The Oil and Gas Journal, January 21, 1937, p. 43.
6. Harry Simons, Time Records Aid in Drilling Program. The Oil and Gas Journal, December 8, 1938, p. 56.
7. F. W. Swift, Graphic Records of Drilling Time Have Many Valuable Features. Oil Weekly, March 12, 1934, p. 14.
8. George Weber, Time Drilling Used Advantageously in Cotton Valley Development. The Oil and Gas Journal, July 7, 1938, p. 38.

Valve-Seat Puller Is Developed by Gulf Pipe Line

By PAUL REED

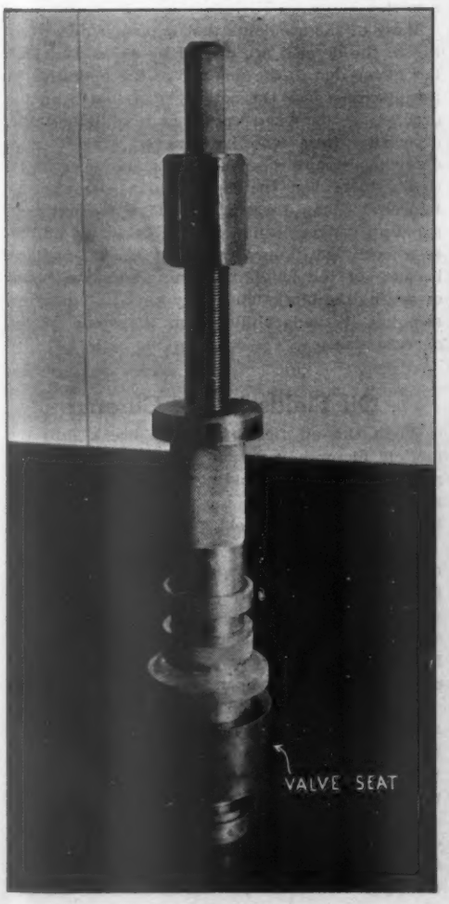
A VALVE-SEAT puller for pulling pump valves has been devised and developed by men connected with station operation in the organization of the Tulsa Pipe Line Division, Gulf Refining Co. From time to time, a number of valve-seat pullers have been made by pipe liners and others with varying degrees of perfection. A description of Gulf's valve-seat puller is presented because it has proved to be particularly well adapted to meeting the requirements of the pulling operation. In construction it is strong enough to withstand the greatest strains put upon it. It functions by getting a full grip on the underside of the valve seat; as a result, the seat is pulled out steadily, with no chance for the puller to slip and to be jerked through, stripping brass from the inner surface.

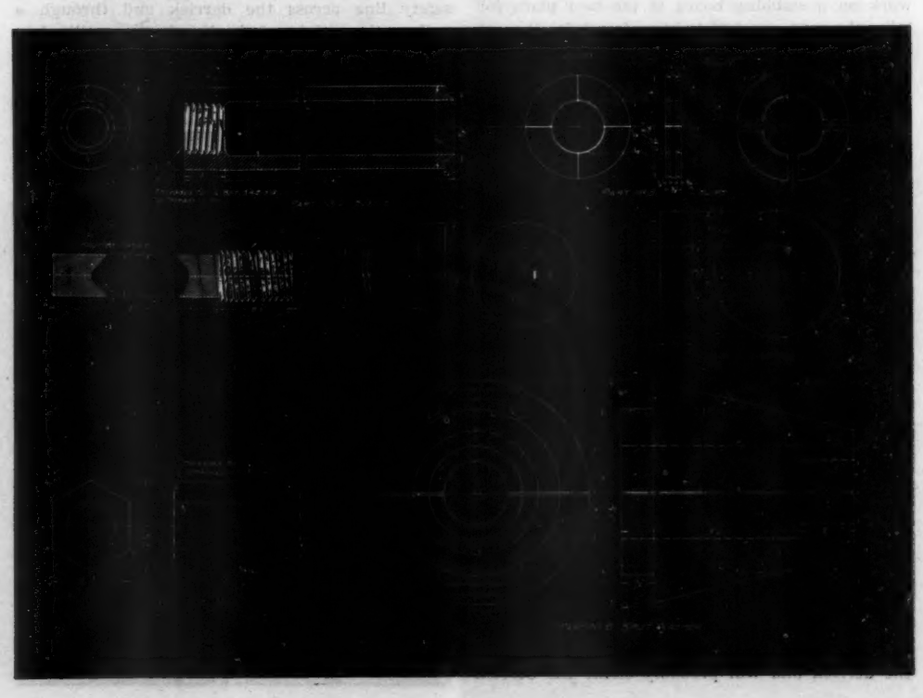
The device is rugged and compact. Essentially, it consists of a bolt screwed in a threaded sleeve; the lower end of the sleeve is beveled so that when the bolt is turned counter-clockwise a round



Above: Removing valve seat from pump with valve-seat puller at a pipeline station. Left: Valve-seat puller with half of split washer removed to show details. Right, below: Drawing of valve-seat puller. Left, below: Close-up of valve seat puller

head on the lower end of the bolt is raised, resulting in forcing out four slips until they protrude under the bottom of the valve seat, where they get sufficient purchase for lifting the seat out of the valve chamber. In using the puller, a wrench turns a nut on the bolt. When the nut is screwed down it bears against a conventional steel washer placed on top of a heavy split washer of spe-





cial design. The split washer is made in two pieces; the inner surfaces fit over the sleeve and the bolt. The split washer furnishes a base for the nut to turn on while extracting the valve seat.

The operation of pulling the valve seat may be said to consist of three steps: (1) The bolt is lowered through the valve seat, in place, in the valve chamber until the slips are below the seat; (2) the sleeve is turned counter-clockwise and, as the sleeve is screwed downward, the beveled surfaces of the lower end of the sleeve press against the beveled rims of the slips; (3) the two halves of the split washer are placed together around the sleeve and bolt. The nut is screwed down; as the nut continues to be turned in a counter-clockwise direction the slips lift the valve seat out of the valve chamber.

As indicated in the foregoing, this valve-seat puller consists of bolt, sleeve, nut, washer, slips, and split washer. In the following description the most conspicuous features of each of these parts are given. The bolt and head at the lower end have an overall length of 20⅝ in. The upper 4 in. of the bolt is knurled; below this, 8½ in. of the bolt is threaded (12 threads to 1 in., S.A.E.); the lower 16½ in. of the bolt is 1¼ in. in diameter. The head, at the lower end of the bolt, is 2 15/32 in. in diameter and ⅝ in. thick. The sleeve is 10¼ in. long, threaded in the upper part, for a distance of 1 in., to fit the bolt; below the threaded part, the inside diameter is 1 ⅛ in.; outside diameter is 2 in. At a point, ¼ in. from the lower end, the outer surface of the sleeve is cut for a distance of ⅛ in. to a point from which it is beveled to the bottom of the sleeve. The outside surface of the sleeve is knurled to facilitate screwing down. The slips are ⅜ in. thick and are made like a washer cut into equal quadrants; when held together, the inside diameter is 1¼ in., outside diameter is 2 15/32 in. The outside rim has two grooves ⅛ in. in diameter for springs to hold slips in a closed position. In practice, it has been found that an ordinary elastic band is more convenient than springs. The nut is six sided (1⅛ in. by 2⅛ in.) and threaded for the 1¼ in. bolt. The split washer, made in two pieces, is 5⅜ in. in diameter across the base; it tapers to a 3-in. diameter at the top; an extension of the base, 4 in. in diameter, fits into the opening of the valve chamber and holds the split washer rigidly in place. The inside diameter of the split washer is 2¼ in. at the bottom; 4¼ in. from the bottom is a shoulder where the inside diameter is reduced to 1½ in. For convenience in using, handles have been welded on the sides made from ¼-in. welding rod material.

The valve puller is known in the Gulf Pipe Line organization as the "Berry valve-seat puller" and it carries the name of the employe who designed the first one used by the company to function in the manner shown in the foregoing description. In the course of time a number of improvements have been incorporated which have changed the device but its original name continues.

20,000 GALLONS PER MINUTE

Unusual battery of 20 Fluor cooling towers capable of handling 20,000 gal. of water each minute. These were recently constructed in California

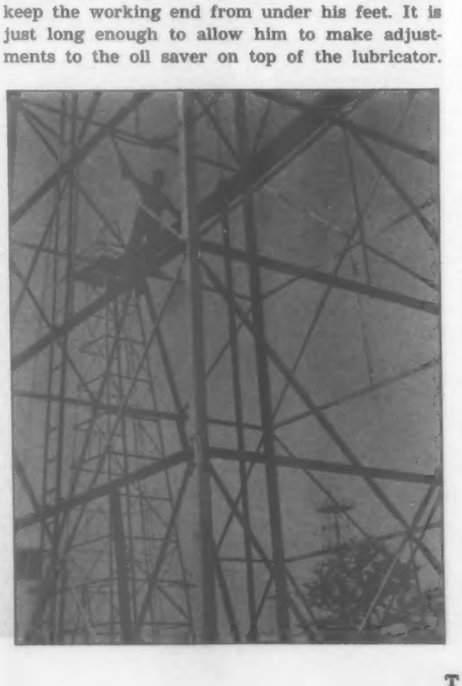
SAFETY — Safety Line Hook-up for Stabbing Board

A problem that the derrick man must meet every time he runs casing or tubing or does any work on a stabbing board is the best place for tying the rope attached to his safety belt. It must be out of the way so it will not foul on the blocks or pipe, it must have sufficient length to allow him freedom of movement while doing his work, it must not be too long or he will trip on it and in case of a fall too much momentum will be gained before he is caught by the safety belt.

In rotary work when the pipe being stabbed is heavy and considerable effort is required to move it into alignment, the derrick man generally installs a "belly" rope across the derrick on which he can lean or balance himself while working. Some men install two ropes about 3 ft. above the board so that they can climb on them whenever a joint is too long; two ropes also give the derrick man more opportunities for getting a handhold, prevent his being knocked off backwards, keep the safety rope from under his feet, and allow for only a short fall in case he is knocked from the board.

In tubing work, the ropes across the derrick are eliminated and the derrick man must depend entirely on his safety rope. If it is attached to the side of the derrick at his back and he falls forward, there is little possibility of his being injured; if he falls backward, there is an excellent chance of his being bruised as his body will swing like a pendulum toward the side of the derrick and will probably strike the derrick irons with considerable and bruising force.

The derrick man in the picture has run his safety line across the derrick and through a pulley; the weight of the line is thus utilized to keep the working end from under his feet. It is just long enough to allow him to make adjustments to the oil saver on top of the lubricator.



The position of the rope is especially important in this particular case as the oil saver generally leaks a small amount and the board becomes very slippery, particularly if there is a light rain or a mist.

Many of the accidents that happen while working in the derrick are caused by some contributing factor due to the manner of the operation of the machinery or the actions of the men on the ground. Drillers and operators of pulling units, especially those who have never worked on a derrick, are apt to get careless and operate on the basis of "let the derrick man take care of himself." They forget that his opportunity of avoiding danger is limited and that any unforeseen occurrence may result in a bad accident because of the height. Running into the board or setting the blocks on it may have its humorous side but it sends chills down the spine of the derrick man.

Oil Fields in the Cinema

When the oil fields begin to break into the motion pictures some unusual jobs develop, a recent occupational oddity being the hiding of red warning lights on top of 12 derricks in the Long Beach Harbor field near Los Angeles.

The red lights are very undesirable when technicolor film is being used, but federal regulations forbid turning them off as they are necessary to warn low-flying airplanes of the presence of the structures. Permission was granted to hide the lights from the camera during the shooting by placing a concealing board in front of each light.

A man was stationed on top of each derrick and at a signal from the picture director he placed his board in front of the light and began listening for airplanes. Should a plane be heard to approach, the men would uncover the lights.

This went on for three nights, the time required to film the scenes. The contributors to art stationed on top of the derricks received a $4.50 pay check at the end of each tour of duty.

QUESTIONS ON TECHNOLOGY

By Charles K. Francis, Ph. D., Technical Editor

Corrosive Tendencies of Natural Gas Containing Hydrogen Sulfide

Information is desired on the detrimental effects, if any, of gas containing hydrogen sulfide when used as fuel for gas engines in the pumping of oil wells. The gas here contains about 500 grains per 100 cu. ft., and I would like to know what action this will have on the motors.—D. F.

Hydrogen sulfide is known to be corrosive to a high degree on the metals used in the petroleum industry. When it is present in a gas it is not corrosive to any appreciable extent at ordinary temperatures unless air and water are present. At elevated temperatures hydrogen sulfide is decomposed so that the sulfur contained tends to combine with the metal, doing considerable damage. The important reactions involved when hydrogen sulfide combines with oxygen of the air and water will explain how it acts to corrode metals.

With a limited supply of air the reaction is

$$2\ H_2S + O_2 \rightarrow 2\ H_2O + 2\ S$$

This explains deposits of sulfur often found in tanks and gas lines. When a full supply of air is present, as when H_2S is burned, sulfur dioxide, which is very corrosive is produced according to

$$2\ H_2S + 3\ O_2 \rightarrow 2\ SO_2 + 2H_2O$$

The simplest way to represent the formation of sulfuric acid, one of the most corrosive substances, is

$$SO_2 + H_2O + O \rightarrow H_2SO_4$$

Meaning that once sulfur dioxide is produced, there will be a change to sulfuric acid, if air and water are furnished.

Aluminum is quite resistant to hydrogen sulfide at ordinary temperatures, while copper and silver are readily attacked and iron is very susceptible. Metals that may be used in the presence of hydrogen sulfide at low temperatures may not be at all suitable at elevated temperatures. It is a well recognized principle of chemistry that heat is the most powerful catalyst known, in most instances greatly accelerating reactions. The heat present with a gas containing a large quantity of hydrogen sulfide will assist its corroding tendencies.

Any quantity of hydrogen sulfide in a natural gas is objectionable as a source of corrosion. If such a gas must be used for fuel in a gas engine, it is a question of economics. The conditions may warrant the serious damage resulting to the engine. When it is possible to make a choice, then the gas containing the smallest quantity of hydrogen sulfide should be chosen. The common requirement for gas used for domestic purposes has been a maximum of 30 grains of hydrogen sulfide per 100 cu. ft. This is somewhat above the danger limit as a toxic gas, but gas containing this quantity has been burned in engines without doing serious damage.

A gas containing 500 grains of hydrogen sulfide will furnish a lot of sulfur, sulfur dioxide, or sulfuric acid. The quantity of free sulfur alone would be approximately 5 lb. on a daily consumption of about 7,500 cu. ft., probably a reasonable daily consumption for a gas engine doing pumping. This appears to be too much for safe operation. A gas of this character should be treated, the hydrogen sulfide being reduced by washing with alkali, phenol, or other hydrogen sulfide absorbing chemicals.

The purchasers of large volumes of natural gas, to be transported through pipe lines, have stipulated in contracts that the gas shall not contain more than 1 grain of hydrogen sulfide per 100 cu. ft.

Cement Mixtures Used in Cementing Work in Oil Wells

What is the composition of the cement mixture used in the cementing work in oil wells? Is any special mixture required? If you can furnish any figures covering the quantity of cement required each year for this purpose, the information will be of much assistance.—E. C.

All of the cement mixtures used in the drilling operations are prepared in the form of a slurry. The neat cement is mixed with enough water to make a thick liquid which is readily pumpable. The proper consistency is frequently standardized on a weight per gallon basis. In addition to weight per gallon, the viscosity of the slurry may be determined by means of a Marsh funnel as a control test.

The ideal condition regarding the quantity of water is to add just enough to satisfy the hydration requirement of the cement, which is about 18.7 lb. or 2.25 gal. per bag of cement weighing 94 lb. However, this is not sufficient to make the mixture fluid enough, so additional water must be added. The dilution should not be too great as excessive quantities of water will result in separation, causing water cavities, chance for the slurry to be contaminated with mud, oil, etc., and consequently ineffective sealing.

It is estimated that 250 bags of cement are used on the average well job in the Mid-Continent area. The total cost for well cementing is over $9,000,000 per year.

Physical and Chemical Laws and Principles Used in the Petroleum Industry

HENRY'S LAW OF SOLUTION

(Gases dissolve in liquids)

The quantity of inert gas which will go into solution in a nonreacting liquid is directly proportional to the pressure of the gas.

This law holds true only for gases and solvents when there is no chemical attraction between the two.

The original statement, as announced by Doctor Henry before the Royal Society of London, was—"The quantity by weight of any given gas absorbed by a given volume of liquid, at a fixed temperature, varies directly with the absolute pressure."

The law is of much importance for the control of conditions surrounding the absorbing liquid when extracting gasoline from natural gas and refinery gas.

Universal and Furol Viscosities at Different Temperatures

Will you kindly inform us as to the following: If a viscosity is 40 at 122° Furol, what is the Saybolt Universal viscosity at 100°? We are interested in obtaining a formula wherein we can change Saybolt Universal viscosities at 100° to Furol viscosities at 122° F. and vice versa.—S. D. C.

The conditions for the determination of Saybolt Universal and Furol viscosities have been standardized by the American Society for Testing Materials as follows:

The Saybolt Universal viscosimeter shall be used only for oils with times of flow of more than 32 seconds. There is no maximum limit to viscosity to be measured by the Saybolt Universal viscosimeter but, in general, liquids having an outflow time of the order of 1,000 seconds and higher, Saybolt Universal, are tested more conveniently by means of the Saybolt Furol viscosimeter.

The Saybolt Furol viscosimeter shall be used only for oils with times of flow of more than 25 seconds. The outflow time of the Furol instrument is approximately one-tenth that of the Universal.

With the Saybolt Universal viscosimeter, determinations shall be made at 70°, 100°, 130°, or 210° F.

With the Saybolt Furol viscosimeter, determinations shall be made at 77°, 100°, 122°, or 210° F. In tests on road and paving materials, determinations may also be made at 140° and 180° F.

A Saybolt Universal viscosity determined at one temperature cannot, with accuracy, be converted to Furol viscosity at another temperature. Furol viscosities are very close to one-tenth the number of seconds found by Saybolt Universal at the same temperature. A Furol viscosity of 40 at 122° F. should test something over 400 Universal at 100° F.

Reference: A.S.T.M. Standards on Petroleum Products, 1938, p. 259.

Origin of Term "Doctor Treatment" for Light Oils

We have been endeavoring to ascertain the origin of the term "doctor treatment" but have been unable to find anything on it in our library. Perhaps you could give us some information relative to the subject.—M. P. D.

Some years ago I obtained the information, the source I do not recall, that the term "doctor" was used because the treatment made the product better. The operation was a success and the patient lived. My files contain a note indicating that the original doctor solution was patented by Robinson, Lima, Ohio, U. S. Patent 910584 (1909).

Another version explaining the origin, states that the process was developed by the chemist in a refinery who was known as "Doc." The operators in charge of sweetening and treating looked to him for detailed instructions and help when a difficulty was encountered, so it was a natural consequence that the process became known as "the doctor's treatment."

Mid-Continent Crude Runs to Stills Above June But Below Year Ago

Estimated daily crude runs in the Mid-Continent area continue their upward rise in July as the demand for gasoline over the vacation season is at its peak. Increased crude runs are general throughout this area, with the exception of North Louisiana.

Total daily crude runs to stills are estimated to be 549,155 bbl. for July, compared with 541,090 bbl. for last month. One year ago the crude runs for July were 557,520 bbl.

East Texas

East Texas led all areas in increased crude runs with a gain of 3,500 bbl. over the previous month. The reopening of two refineries accounted for the greater share of this increase. The former Utah Refining Co. plant at Kilgore has resumed operations under the company name of Model Oil & Refining Co., beginning the last week in June with an average daily run of 900 bbl. The other refinery change in East Texas is the Tyreco Refining Co., which has been placed back on stream with 1,900 bbl. daily scheduled to be processed during July.

Oklahoma and Kansas

Oklahoma refinery runs were increased 2,385 bbl. daily during July with an estimated total of 159,285 bbl., compared with 156,900 bbl. of crude run in June. There were no important changes in crude runs for the month, small increases being made at several of the refineries. Cities Service Oil Co., Ponca City, has 10,000 bbl. daily scheduled for July, as well as for June, the latter month being reported previously as 13,300 bbl.

Estimated daily refinery crude runs for Kansas were reported to be 134,220 bbl. for July, compared with 133,150 bbl. for June, a gain of 1,070 bbl. Small increases in crude runs were general throughout the state.

Mid-Continent Crude Runs

Average Daily Barrels

(Advance estimate compiled by The Oil and Gas Journal)

	1937	1938	1939
January	531,535	529,710	503,405
February	541,790	507,985	494,910
March	533,875	491,935	497,180
April	558,385	532,120	523,535
May	572,855	527,315	534,535
June	593,625	540,005	541,090
July	605,640	557,520	549,155
August	624,475	554,810	.....
September	625,485	555,695	.....
October	619,210	531,325	.....
November	592,170	524,035	.....
December	544,040	503,530	.....

Operations by Refinery Districts

Daily crude runs

	July	June	Incr.
Arkansas	27,050	26,950	100
East Texas	46,500	43,000	3,500
Kansas	134,220	133,150	1,070
N. Central Texas	39,500	38,090	1,410
North Louisiana	39,400	42,000	*2,600
Oklahoma	159,285	156,900	2,385
Southwest Texas	18,100	17,300	800
W. Texas Panhandle	85,100	83,700	1,400
Total	549,155	541,090	8,065

*Decrease.

In North Louisiana, the former Lake Price Refineries, Inc., which has been shut down for several months, will be placed again in operation, possibly during July, by the Pennant Refining Co. of Shreveport; the plant has been adapted to the manufacture of lubricating oils. Crude runs in this area show a decrease of 2,600 bbl. over June, due to reductions being made at the Arkansas Fuel Oil Co. refinery at Bossier City and also the Atlas Pipe Line Co. refinery at Shreveport. Crude runs for the month total 39,400 bbl., compared with 42,000 for June.

Arkansas Operations

Estimated daily crude runs for Arkansas are reported as 27,050 bbl. for July, compared with 26,950 bbl. during June, an increase of 100 bbl. This small increase was due to reduced operations at the Henry H. Cross plant at Smackover and at the Stephens Refining Co. plant at Stephens. The Berry Asphalt Co., Waterloo, and the Root Refining Co., El Dorado, increased crude runs to stills in July.

North Central Texas

In the North Central Texas area daily crude runs were scheduled to be slightly higher than during June. The increases were small at individual plants and general throughout the area. Total crude runs for the month are reported as 39,500 bbl., an increase of 1,410 bbl. compared with the June total of 38,090 bbl.

Refineries in the Southwest Texas area showed greater activity over last month with a total of 18,100 bbl. scheduled to be run in July compared with 17,300 bbl. in June. Increases were small and general throughout the area.

The West Texas and Panhandle area showed a gain of 1,400 bbl. daily over June with 85,100 bbl. reported to be run in July. This increase was due to small gains made at a number of refineries. Total estimated daily crude runs for last month were 83,700 bbl.

Estimated Daily Average Mid-Continent Refinery Crude Runs for July

OKLAHOMA

Company and location—	Daily capacity	Av. dly. runs July	Av. dly. runs June
Anderson-Prichard Ref. Corp., Cyril	7,500	6,500	6,500
Barnsdall Ref. Corp., Barnsdall	5,000	4,000	4,000
Bell Oil & Gas Co., Granfield	5,000	3,000	3,000
Ben Franklin Ref. Co., Ardmore	4,000	3,500	3,500
Black Gold Ref. Co., Oklahoma City	2,500	2,000	2,500
Champlin Ref. Co., Enid	16,000	15,000	15,000
Cities Service Oil Co., Okmulgee	4,000	(*)	(*)
Cities Service Oil Co., Ponca City	14,000	10,000	10,000
Continental Oil Co., Ponca City	28,000	21,000	19,500
Cosco Oil Co., Wynnewood	2,500	(*)	(*)
Cushing Ref. & Gasoline Co., Cushing	4,200	4,000	4,000
Deep Rock Oil Corp., Cushing	10,000	9,000	9,000
Eason Oil Co., Enid	3,000	(*)	(*)
Johnson Oil Ref. Co., Cleveland	6,000	5,000	5,000
Mid-Continent Pet. Corp., West Tulsa	35,000	21,000	21,000
Ohio Oil Co., Bristow	5,000	2,500	2,500
Omar Ref. Co., Garber	5,000	2,500	2,500
Phillips Pet. Co., Okmulgee	6,500	5,485	5,700
Peppers Gasoline Co., Oklahoma City	500	400	400
Pure Oil Co., Muskogee	9,000	(*)	(*)
Rock Island Ref. Co., Beckett	6,500	6,200	6,200
Sinclair Ref. Co., Sand Springs	6,000	4,500	4,000
Sun Oil Co., Yale	5,000	1,800	1,800
Sunray Oil Co., Allen	7,000	5,000	5,000
Texas Co., West Tulsa	16,000	11,000	11,000
Tide Water Oil Co., Drumright	12,000	11,000	10,000
Wilcox Ref. Division, Bristow	5,000	4,900	4,800
Total	230,200	159,285	156,900

*Shut down.

KANSAS

Company and location—	Daily capacity	Av. dly. runs July	Av. dly. runs June
Anco Ref. Co., Garnett	500	450	450
Barnsdall Ref. Co., Wichita	5,000	5,000	5,000
Bay Pet. Co., McPherson	4,000	3,000	3,000
Chanute Ref. Co., Chanute	1,000	1,000	1,000
Derby Oil Co., Wichita	8,000	7,500	7,000
El Dorado Ref. Co., Eldorado	5,000	5,000	4,500
Falcon Ref. Co., Inc., Great Bend	1,000	800	800
Globe Oil & Ref. Co., McPherson	15,000	15,000	15,000
Kanotex Ref. Co., Arkansas City	12,000	6,500	6,500
National Ref. Co., Coffeyville	8,000	5,000	5,000
Pet. Products Co., Chanute	1,250	1,750	1,200
Phillips Pet. Co., Kansas City	23,000	15,970	16,500
Roper Pet. Co., Parsons	750	550	500
Shallow Water Ref. Co., Scott City	2,500	1,000	1,000
Sinclair Ref. Co., Coffeyville	12,000	8,500	8,000
Sinclair Ref. Co., Argentine	11,000	8,500	8,000
Skelly Oil Co., Eldorado	23,000	20,000	20,000
Socony-Vacuum Oil Co., Inc., Augusta	20,000	17,000	18,000
Standard Oil Co., (Indiana), Neodesha	7,500	7,000	7,000
United Ref. Co., Russell	1,200	700	700
Vickers Pet. Co., Potwin	4,000	4,000	4,000
Total	165,700	134,220	133,150

EAST TEXAS

Company and location—	Daily capacity	Av. dly. runs July	Av. dly. runs June
Beacon Oil & Ref. Co., Henderson	4,500	(*)	(*)
Danciger Refs., Inc., Longview	6,000	(*)	(*)
East Texas Ref. Co., Longview	6,000	5,100	5,200
Hurricane Pet. Corp., Overton	5,000	3,700	3,700
Hurricane Pet. Corp., Arp	3,300	2,800	2,800
Lacy Ref. Co., Kilgore	3,000	2,000	1,600
Magnolia Pet. Co., Corsicana	5,000	4,500	4,200
McMurrey Ref. Co., Tyler	10,000	4,200	4,500
Model Oil & Ref. Co., Kilgore	2,000	900	(*)
Paluxy Asphalt Co., Talco	5,000	2,500	2,500
Premier Oil Ref. of Texas, Greggtown	4,000	3,000	2,600
Southport Pet. Co., Kilgore	4,000	1,600	1,700
Talco Asphalt & Ref. Co., Mount Pleasant	7,500	5,000	5,000
Texas Co., Dallas	16,000	8,000	8,000
Texas Oil Products Co., Gladewater	3,000	1,300	1,200
Tower Ref. Co., Overton	3,500	(*)	(*)
Tyreco Ref. Co., Arp	3,500	1,900	(*)
Total	91,300	46,500	43,000

*Shut down.

WEST TEXAS AND PANHANDLE

Company and location—	Daily capacity	Av. dly. runs July	Av. dly. runs June
Aero Gas & Ref. Co., Fort Stockton	350	300	250
Coltex Ref. Co., Colorado	12,500	8,500	8,000
Cosden Oil Co., Big Spring	12,500	10,500	10,500
Danciger Refs., Inc., Pampa	6,500	5,000	5,000
Danube Oil Corp., Borger	1,200	800	800
Farmers Ref., Lubbock	500	300	250
Gulf Oil Corp., Sweetwater	7,000	6,200	6,800
Howard County Ref. Co., Big Spring	2,000	1,200	1,000
Motor Fuels Corp., Levelland	4,000	...	(†)
Moutray Oil Co., Hawley	1,400	800	600
Onyx Ref. Corp., Hawley	3,000	1,800	1,800
Panhandle Ref. Co., Kings Mill	2,500	1,200	1,700
Payward Ref. Co., Shamrock	600	500	500
Phillips Pet. Co., Borger	35,000	25,800	25,000
Post Refining Co., Rotan	800	500	500
Shamrock Oil & Gas Corp., Sunray	3,000	2,250	2,250
Stamford Ref. Co., Stamford	450	400	400
Shamrock Oil & Gas Corp., Lefors	1,600	1,200	1,200
Standard Oil Co. of Texas, El Paso	14,000	9,000	8,900
Star Light Ref. Co., Ballinger	1,000	500	500
Texas Co., El Paso	2,000	1,600	1,500
Texas Co., Amarillo	6,000	3,500	3,000
Western Ref. Co., Fort Stockton	1,000	750	750
Wickett Pet. Co., Wickett	3,500	2,500	2,500
Total	122,400	85,100	83,700

†Building.

SOUTHWEST TEXAS

Company and location—	Daily capacity	Av. dly. runs July	Av. dly. runs June
Border Oil & Ref. Co., Sullivan City	1,000	500	400
Eggleston Oil Producers Co., Three Rivers	1,000	1,000	1,000
Humble Oil & Ref. Co., San Antonio	5,000	3,500	3,500
Magnolia Pet. Co., Luling	8,000	5,200	5,000
Majestic Ref. Co., Dale	500	(*)	(*)
Pettus Oil & Ref. Co., Pettus	1,000	900	900
Phoenix Ref. Co., San Antonio	2,000	1,500	1,500
Phoenix Ref. Co., Pettus	900	750	750
Pioneer Oil & Ref. Co., Somerset	2,000	750	750
Rado Ref & Prod. Co., McAllen	800	500	500
Texas Co., San Antonio	5,000	3,500	3,000
Total	27,200	18,100	17,300

*Shut down.

NORTH LOUISIANA

Company and location—	Daily capacity	Av. dly. runs July	Av. dly. runs June
Arkansas Fuel Oil Co., Bossier City	25,000	18,500	19,000
Atlas Pipe Line Co., Shreveport	12,500	5,300	5,800
Bayou State Oil Corp., Hosston	750	600	500
East Texas Ref. Co., Sandra	7,000	(*)	1,700
Premier Oil Ref. Co. of Texas, Cotton Valley	3,500	3,000	3,000
Rodessa Oil & Ref. Corp., Cedar Grove	12,000	10,000	10,000
Stanolind Oil & Ref. Co., Superior	5,000	2,000	2,000
Total	66,550	39,400	42,000

*Shut down.

ARKANSAS

Company and location—	Daily capacity	Av. dly. runs July	Av. dly. runs June
Berry Asphalt Co., Waterloo	2,000	1,500	1,250
Henry H. Cross, Smackover	6,000	3,500	4,000
Lion Oil Ref. Co., El Dorado	17,000	12,000	12,000
Macmillan Pet. Corp., Norphlet	2,500	2,000	2,000
Root Ref. Co., El Dorado	10,000	7,800	7,200
Stephens Ref. Co., Stephens	700	250	500
Total	38,200	27,050	26,950

NORTH CENTRAL TEXAS

Company and location—	Daily capacity	Av. dly. runs July	Av. dly. runs June
Baird Refining Co., Baird	1,500	1,200	1,000
Bryson Pipe Line & Refining Co., Bryson	2,000	1,250	1,250
Bryson Ref. Co., Inc., Bryson	1,500	800	750
Coleman Ref. Co., Coleman	1,000	400	500
Continental Oil Co., Wichita Falls	6,000	5,000	4,300
Cosden Pet. Corp., Graham	2,000	1,000	1,000
Falls Ref. Co., Wichita Falls	2,500	500	500
Gratex Ref. & Fuel Oil Co., Graham	300	300	300
Gulf Oil Corp., Fort Worth	8,000	6,000	5,500
Hightower Oil & Ref. Corp., Brownwood	750	(*)	(*)
Jacksboro Ref. Co., Jacksboro	400	250	250
La Salle Pet. Cor., Burkburnett	3,000	1,000	1,000
Paluxy Asphalt Co., Mankins	1,500	1,200	1,000
Magnolia Pet. Co., Fort Worth	7,500	5,200	5,000
Muenster Ref. Co., Muenster	1,800	800	800
North Texas Ref. Co., Gainesville	600	300	300
Ohio Oil Co., Fort Worth	5,000	4,000	4,000
Olney Oil & Ref. Co., North Olney	3,500	1,800	1,900
Panhandle Ref. Co., Wichita Falls	4,200	2,750	3,000
Panhandle Ref. Co., Lueders	1,500	925	900
Taylor Ref. Co., Taylor	1,000	600	600
Texas Pacific Coal & Oil Co., Caddo	800	600	600
Tucker Oil Co., Burkburnett	250	125	140
W. T. Waggoner Est., Vernon	4,000	3,500	3,500
Total	60,600	39,500	38,090

*Shut down. †Building.

High Safety Record Attained by Louisiana Standard Plant

A recent Bureau of Mines report (Circular 7059) covers the remarkable safety record in accident prevention at the large Baton Rouge refinery of the Standard Oil Co. of Louisiana. The refinery was awarded the Joseph A. Holmes Safety Association certificate of honor for its low accident rate during 1937. The accident frequency rate for that year was only 3.08 and the severity rate was 0.239 in the performance of 7,453,730 man-hours of work.

The report reviews the long record of first-aid training of the plant employes, the organization and duties of a safety department, safety meetings, first-aid contests, Holmes safety chapters, safety publications, safety advertising, bulletin boards, and safety equipment.

Three lives have been saved by application of artificial respiration inside the plant and a large number of others outside the plant. Five employes have received the President's Medal of the National Safety Council and a number of employes have received certificates of honor from the Joseph A. Holmes Safety Association.

Californians Honor L. P. St. Clair on Retirement

L. P. St. Clair, who recently retired as chairman of the board of Union Oil Co. and former president of that company, was honored with a testimonial dinner by the wildcat committee of the California Oil and Gas Association. Those in attendance were: (standing) Charles D. Wagner; Harold T. Wyatt, production manager, Shell Oil Co.; Arthur E. Wallace, independent operator; John B. Winston, Jr.; W. R. Gulberson; E. C. Bolton, Ohio Oil Co.; (seated) Charles A. Johnson, president, Holly Oil Co.; H. L. Westbrook, vice president, Belridge Oil Co. and treasurer of California Oil and Gas Association; Alexander B. Macbeth, president, Southern California Gas Co.; Ralph B. Lloyd, president, Lloyd Corp.; R. A. Broomfield, executive vice president, Barnsdall Oil Co.; Charles S. Jones, president, Richfield Oil Corp.; W. H. Berg, president, Standard Oil Co.; L. P. St. Clair; J. R. Pemberton, California oil umpire, toastmaster; A. L. Weil, president, General Petroleum Corp.; S. Belither, vice president, Shell Oil Co., Inc.; Torrey H. Webb, vice president, general manager, Texas Co.; C. P. Watson, vice president, Seaboard Oil Corp.; Roy E. Collom, vice president, Continental Oil Co., and vice president of California Oil and Gas Association; William Reinhardt, vice president, Union Pacific Railroad Co.; A. C. Rubel, vice president, Union Oil Co.; W. C. Whaley, vice president, Barnsdall Oil Co.; D. M. Smith, president, Sovereign Oil Co.; H. H. Clark, National Supply Co.; D. S. Kilgour, assistant manager, California Oil and Gas Association; Dale W. Russell, Republic Supply Co.; Mark D. Woolery, independent producer; F. E. Foster, managing director, California Oil and Gas Association; L. L. Aubert, general manager, Bankline Oil Co.; J. A. Dunn, National Supply Co.; W. H. Geis, field department, Union Oil Co.; F. E. Rheem, Shell Oil Co.; Ward B. Blodget, Bell-Loffland Drilling Co.; Neil C. Needham, manager, land department, General Petroleum Corp.; A. C. Galbraith, vice president, Union Oil Co.; Joseph Jensen, production engineer, Tide Water Associated Oil Co.; Frank A. Morgan, vice president, Richfield Oil Corp.; E. S. St. Clair, independent producer; Dana Hogan, president, Hogan Petroleum Co.; Loren L. Hillman, president, L. L. Hillman, Inc.; Floyd S. Bryant, assistant manager of production, Standard Oil Co.; J. U. Stair, vice president, Shell Oil Co.; William C. Brooks, purchasing agent, Standard Oil Co., and Robert C. Collier, assistant general sales manager, Shell Oil Co.

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FIELD OPERATIONS

Summarizing the Week's Developments

OKLAHOMA—The St. Louis field in Pottawatomie County was extended ¾ mile southeastward to within one location of the Seminole County line. Extension of the Cement field, Caddo County, ½ mile southwestward was indicated.

KANSAS—The second Misener sand well in the Medicine Lodge pool, Barber County, flowed 25 bbl. of oil an hour naturally, extending the productive area. An oil pool was opened in Section 15-15-14w, northwest of the Trapp field, Russell County. Gurney pool, Russell County, was extended ½ mile southward. Chase pool, Rice County, was extended ½ mile northward, and the Campbell and Midway pools, Rice County, were joined. Lansing lime production was found 1 mile northwest of the Prusa pool, Barton County.

OHIO—Licking County, an old oil region, supplied a 125-bbl. and a 3,400,000-cu. ft. gasser, both producing from Clinton sand.

MICHIGAN—Michigan production increases slowly but steadily, having passed the 69,000-bbl. mark last week, notwithstanding proration of wells. Clare County was responsible for nearly half of the 10,130 bbl. of new potential production in the state.

ILLINOIS—The recent Devonian lime well in the Sandoval area flowed 1,654 bbl. on a 24-hour test. The largest completion of last week was a 1,440-bbl. well in the Salem field. Average initial production per well has fallen off in the past fortnight.

LA-ARK-TEX—In coastal Louisiana, the Eola field was again extended and a well ½ mile south of the extension is close to completion. The 10,385-ft. well in the Sibley area in Webster Parish, Louisiana, is trying to find production in the upper levels with little success so far.

TEXAS: Gulf Coast—A new field in the Martha area in Liberty County was assured by the completion of a 240-bbl. well. A third producing horizon was opened on the southeast flank of the Esperson dome, also in Liberty County.

Southwest Texas—Promise of a deeper pay in the Minnie Bock area in Nueces County and prospect of a new shallow pay in Webb County featured the week.

West Texas—Search for deep production in the central and south Permian basin was an interesting feature. Deepening to the lower pay in the North Cowden pool in Ector County developed a 3,633-bbl. production following the completion of an offset which produced 4,899 bbl. from the same pay. Other wells will be deepened as a result. The Wasson-Denver and the Bennett fields have been brought more closely together.

North and Eastern Texas—The Hull-Silk and Sikes pools in Archer County are taking on the appearance of one field as intervening wells come in as producers. Only three wells were completed in the East Texas field last week. A wildcat in Rusk County was a failure and likewise a Limestone County outpost. The Mabank and Opelika pools are being closely watched by East Texas operators.

CALIFORNIA—The Coles Levee field in Kern County was extended a mile westward by a 2,150-bbl. well producing 53.8-gravity oil and 34,000,000 cu. ft. of gas. This gives the field about 1,500 acres that will be productive. A 2,950-bbl. well was completed in the Southeast Coalinga field in Fresno County.

Completions in All Fields

(Week Ending July 8, 1939)

	Oil	Gas	Dry	Total	1939 total comp. to date	1938 total comp. to date
N. Y., Pa., and W. Va.	40	13	6	59	1,595	2,052
Ohio	6	11	6	23	489	488
Indiana	6	0	3	9	120	42
Kentucky	5	1	9	15	330	425
Illinois	60	0	12	72	1,786	598
Michigan	21	1	11	33	684	421
Kansas	19	1	4	24	605	889
Oklahoma	18	6	19	43	949	929
Texas:						
North Central Texas	39	1	27	67	1,262	1,644
West Texas	34	0	8	42	973	1,173
Texas Panhandle	10	2	1	13	205	325
East Texas	3	0	0	3	261	1,135
East Central Texas	2	1	0	3	132	190
East Texas Border	1	0	0	1	36	85
Gulf Coast Texas	22	2	2	26	710	684
Southwest Texas	32	3	20	55	1,237	1,129
Total Texas	143	9	58	210	4,816	6,365
North Louisiana	5	1	2	8	270	335
Gulf Coast Louisiana	7	0	5	12	306	250
Total Louisiana	12	1	7	20	576	585
Arkansas	3	0	0	3	124	128
Montana	4	1	1	6	76	46
Wyoming	0	0	0	0	45	83
Colorado	0	0	0	0	4	6
New Mexico	14	0	3	17	314	289
California	13	1	1	15	475	701
Total United States	364	45	140	549	12,988	14,047
Total previous week	362	35	114	511		
Week ending July 9, 1938	347	36	112	495		

Outstanding Fields—Highlights

(Week Ending July 8, 1939)

FIELD—	Rigs up	Wells drlg.	Weekly oil completions	Initial prod.	Total No. oil wells	Daily av. prod.
TEXAS						
K.M.A.	23	46	12	9,573	1,043	24,000
Wasson-Bennett	16	56	9	9,300	331	15,786
Ector County	29	59	11	8,126	1,756	45,200
Pecos County	16	23	4	435	1,152	36,150
Jones County	11	26	8	13,376	518	8,500
East Texas	4	26	3	183	25,936	373,000
OKLAHOMA						
St. Louis	4	33	5	560	856	37,500
KANSAS						
Barton County	2	18	2	626	435	14,835
Ellis County	5	14	5	4,192	397	10,235
Rice County	5	28	2	421	1,345	29,010
Russell County	6	35	2	1,113	1,259	25,605
NEW MEXICO						
Lea County	9	51	11	3,849	2,175	106,020
LA-ARK-TEX						
Cotton Valley (deep)	0	8	0	0	131	11,385
Magnolia, Ark.	0	16	3	1,704	37	10,325
MICHIGAN						
Freeman-Redding	2	19	3	5,470	91	13,681
Kent County	2	2	5	2,100	66	8,124
CALIFORNIA						
Wilmington	4	19	5	2,290	649	82,150
ILLINOIS						
Salem field	11	72	36	8,358	1,035	148,060
Louden field	7	60	8	1,958	930	48,955
Other basin fields	23	201	16	5,262	1,425	55,800
Old fields	....	.....	....	.....	13,500	8,300

Illinois and Kentucky

By STAFF CORRESPONDENT

Illinois Hits 261,115 Barrels; New Highs for Salem-Louden

CENTRALIA, Ill., July 10.—Production of Illinois continued its climb in the past week with an average of 261,115 bbl. per day, of which the Salem field in Marion County is credited with 148,060 bbl. per day and Louden in Fayette County, 48,955 bbl. per day.

Activity in the Salem field showed good results last week with the completion of 30 wells for a total initial production of 8,358 bbl.; two other wells were added in the county to bring the total to 8,758 bbl. Louden field showed a decline in completions with only 8 oil wells for an initial of 1,958 bbl.; Carter Oil Co. also completed four gas-input wells for its pressure maintenance system. The St. James pool continued in its stride with three completions for an initial of 454 bbl.

A total of 76 wells were completed in the state with 60 of them oil wells, 12 dry holes, and 4 gas-input wells. The new work exceeded the completions by 7, a total of 83 starts having been reported, 12 of which were wildcats.

The completions generally were not as large as in preceding weeks, 360 bbl. being the largest in Fayette County, while the Salem field showed a 1,440-bbl. well, a 1,005-bbl. well and one that made 800 bbl. on a 10-hour test. Wayne County had one well that made 500 bbl. in 11½ hours and Clay County's largest was 475 bbl. The average for the 60 oil completions was 260 bbl. for a total initial of 15,578 bbl.

Wayne County was second in initial production, with 2,791 bbl. from seven wells, Clay County had 1,307 bbl. initial production from four wells, Washington County had 228 bbl. initial production from four wells, St. Clair and Richland counties had one well each with 30 bbl. and 52 bbl. initial, respectively.

Salem led in the amount of new work as well as the number of completions, 37 first reports of new operations coming from that field; there were two other first reports for Marion County. Fayette County had 17 new operations although one was a salt water disposal well and another a gas-input well; 12 oil tests were started in Louden and three in St. James field. Wayne County had four new operations, one of them a wildcat, and Washington County had five starts close around production.

Texas Co. continued to lead the Salem pool with 21 new tests started last week, Magnolia Petroleum Co. started six and independent operators started 10. Carter Oil Co. continued to set the pace in the Louden area and Pure Oil Co. was the leader in work in Wayne, Clay and Richland counties.

Five wells were near the pay horizon or were testing in Jefferson County; Wayne County had 10 important tests going, and White County had seven wildcats drilling or nearing completion, with one of them producing 3,000,000 cu. ft. of gas at 275 lb. per sq. in. in flowing pressure.

Potentialities of the Devonian play north of Sandoval will soon be determined by four wells started in that area. Menhall is starting No. 2 Benoist, SE NE NW Section 8-2n-1e; Max Pray No. 1 Robinson, SW SW SW Section 4-2n-1e, was drilling at 900 ft.; Charles Baldwin and associates are moving in material for No. 1 Schaffnit in the SE SW SW of the same section. One location east, Kimmel & Taylor have a derrick up for No. 1 Kennedy. Southwestern Oil Co. No. 22 Benoist, NE NE NE Section 8-2n-1e, an old well drilling deeper, was experiencing trouble with cavings at 1,600 ft.

A 24-hour gage revealed that the Menhall Devonian discovery exceeded expectations, the well flowing 1,654 bbl. in 24 hours. The well was originally reported good for several thousand barrels but later gages placed it at 200 bbl. daily. The oil is coming from 2,924 ft. and is reported to be 42 gravity. The Manley Oil Corp. is completing a pipe line from the Menhall discovery to connect with the company line from the Lake Centralia pool. Manley also plans to build a loading rack at Sandoval.

Perry County, which last week was knocking on the door to be admitted to the counties in which oil production has been uncovered, proved it wasn't worthy when G. H. Blankenship announced that his No. 1 Rutowski was being abandoned along with his No. 1 Rheinecker; two other operations which had rigs up were abandoned.

Illinois Fields

HIGHLIGHTS OF THE WEEK: Average initial production per well has been falling off in the past fortnight in the Salem field, the largest well completed last week in that field being rated at 1,440 bbl. per day. The state is being drained after the manner of olden days previous to the application of scientific methods of developing to get the greatest ultimate production.

One feature of the week was the fact that the Devonian lime well of Menhall and others north of the old Sandoval pool produced 1,654 bbl. in a 24-hour test. It had been discounted previous to this test. Four other wells are being drilled to the Devonian in the neighborhood of the Menhall well.

Average daily production of new fields, 252,815 bbl.; old fields, 8,300 bbl.; total, 261,115 bbl.

Completed oil wells, 60; operations including locations, rigs and wells drilling, 364.

The Week's Completions

Completions of the week were as follows, the initial production representing 24 hours unless otherwise noted.

In Gallatin County, J. Garfield Buell No. 1 Egyptian Fuel & Lumber Co., C N½ NW NW Section 16-8s-10e, St. Louis lime 2,905 ft., abandoned at 2,960 ft.

In Moultrie County, Seaboard Oil Co. No. 1 Purvis, NE SW SE Section 9-13n-6e, Fredonia lime 1,950 ft., total depth, no show of oil and was abandoned.

In Coles County, Marvin and others No. 1 J. H. Bell, SW SE SE Section 28-12n-7e, St. Louis lime 2,295 ft., total depth 2,318 ft., dry and abandoned.

In Fayette County, Carter Oil Co. No. 2 Ella Huffman, NW NE SE Section 2-8n-3e, Cypress 1,512-1,606 ft., plugged back to 1,537 ft. from 1,606 ft., shot with 20 qt., swabbed 132 bbl. Carter No. 2 Cora Larimore, NW NE NE Section 11-8n-3e, swabbed 340 bbl. from Cypress at 1,485-1,516 ft., and Paint Creek 1,556-80 ft., after a 30-qt. shot in Paint Creek, and 10-qt. shot in Cypress. Carter No. 4 Lem Lilly, SE SW SE Section 14-8n-3e, Cypress 1,549-67 ft., 20-qt. shot, flowed 158 bbl. in 8 hours. Carter No. 2 Lora McClain, SW NW SW Section 33-8n-3e, completed in Cypress at 1,475-1,518 ft., stray 1,523-41 ft., and Bethel 1,574-84 ft., swabbed 344 bbl. Carter No. 1 Hagan, NE NW SE Section 21-8n-3e, stray 1,520-37 ft., and Bethel in streaks 1,568-1,606 ft., 10-qt. shot in Bethel, and pumped 92 bbl. Carter No. 11-7 R. Larimore, C SW¼ Section 11-8n-3e, was completed at total depth of 1,586 ft., for a gas input well in spite of its making some gas and 50 bbl. of oil. Carter No. 11-8 Robert Matson, C SE¼ Section 11-8n-3e, Cypress 1,426-59 ft., stray 1,517-25 ft., perforated casing 1,421-53 ft., and was completed for a gas input well. Carter No. 11-5 N. W. Wetmore, just east of the west line of Section 11-8n-3e, Cypress 1,475-98 ft., stray 1,592-98 ft., total depth, 1,610 ft., perforated casing at 1,587-97 ft., 1,509-30 ft., and 1,493-1,501 ft., and was completed for a gas input well. Carter No. 14-1 R. Larimore, NW NW NW Section 14-8n-3e, Cypress 1,427-69 ft., stray 1,511-31 ft., Bethel 1,554-60 ft., perforated casing 1,511 ft. and 1,422 ft. and was completed for a gas input well. Hugh Production Co. No. 2 Stinebring, SE NW SE Section 12-7n-2e, Cypress at 1,535 ft. with no show of oil and was dry and abandoned at 1,867 ft. Ohio Oil Co. No. 4 Rush, SW NW SW Section 30-6n-3e, Cypress 1,497-1,552 ft., shot with 3 qt., pumped 230 bbl.

Sigel and others No. 3 Owens, SW NE NW Section 8-7n-3e, Fayette County, Bethel 1,505 ft., abandoned at 1,525 ft. Carter Oil Co. No. 8 M. J. Griffith, NW NE NE Section 31-7n-3e, Cypress 1,517-53 ft., shot with 60 qt., swabbed 360 bbl. Carter No. 9 M. J. Griffith, SW NE NE Section 31-7n-3e, Cypress 1,525-45 ft., shot with 40 qt., swabbed 302 bbl.

In the St. James field of Fayette County, Texas Co. No. 2 M. Griffith, SE SE NE Section 25-6n-2e, Cypress 1,520 ft., sand 1,542-51 ft., pumped 26 bbl. in 3 hours. Shulman Brothers No. 7 Combe, SE NW SW Section 6-6n-2e, Cypress 1,514-55 ft., 40-qt. shot, 1,100 ft. of oil in hole, pumped estimated 200 bbl. Ohio Oil Co. No. 3 Rush, NW NW SW Section 30-6n-2e, Cypress 1,502 ft., with saturation 1,532-53 ft., 3-qt. shot, pumped 228 bbl.

In Richland County, Mabee Consolidated Oil Co. No. 6 Sparr, NE SE SE Section 23-4n-9e, Weiler 2,579-2,600 ft., 60-qt. shot, pumped 52 bbl.

In Madison County, Dr. E. L. Loper No. 1 E. Keller, SW SW NW Section 8-3n-8w, reported some show of oil in Devonian 1,287 ft., formation would not take acid, abandoned 1,313 ft.

In Clay County, Pure Oil Co. No. 3 A. G. Stanford, C W½ SE SW Section 32-3n-8e, shows of oil in McClosky 3,005-81 ft., flowed 127 bbl. by heads in 15 hours, acidized with 5,000 gal., flowed 454 bbl. Pure No. 3 George L. Travis, C W½ SW SE Section 32-2n-8e, McClosky pay in streaks from 2,960 to 3,058 ft., attempted to complete through removeable pipe at 2,651-71 ft., but got salt water, squeezed and completed at 3,063 ft. for 178 bbl. of oil. Centralia Refining Co. No. 1 Weiler School, SW SW SW Section 3-2n-8e, good shows of oil in streaks at 2,993-3,021 ft., made 1 bbl. of fluid per hour, acidized with 1,000 gal. and 5,000 gal., flowed 200 bbl. of oil with some salt water showing. Pure Oil Co. No. 1 J. Milner Bissey, C W½ NW NE Section 18-2n-8e, McClosky pay at 2,995-3,004 ft., 3,025-30 ft., and 3,088-90 ft., flowed 475 bbl.

In Wayne County, Andy Bruner No. 2 Kuyworth, NE NE NW Section 30-2n-8e, McClosky 3,021 ft., deepened to 3,036 ft., flowed 750 bbl. Pure Oil Co. No. 1 Stella Stein, NE SE SW Section 19-2n-8e, McClosky pay 3,021-31 ft., 3,045-47 ft., and 3,060-62 ft., total depth 3,072 ft., acidized with 5,000 gal., flowed 313 bbl. Pure No. 3 Lucy Hubble, C W½ NW SE Section 4-1n-8e, McClosky pay 3,040-47 ft., 3,050-55 ft., and 3,060-62 ft., and show of oil at 3,071-78 ft., flowed 416 bbl. Pure No. 3 Leota McCracken, C W½ SW NW Section 3-1n-8e, McClosky pay 3,039-46 ft., shows at 3,063-65 ft. and 3,093-95 ft., acidized with 5,000 gal., flowed 236 bbl. Pure No. 1 V. L. Lane, C E½ SW SW Section 27-1n-7e, McClosky pay 3,122-28 ft., 3,129-31 ft., 3,138-42 ft., and 3,145-69 ft., total depth 3,175 ft. The hole was plugged back to 3,104 ft. and perforated with 234

shots, flowed 347 bbl. Simmons and others No. 1 Walter Felix, SW SW SE Section 27-2s-8e, McClosky 3,353-59 ft., acidized with 3,000 gal. and 6,000 gal., pumped 189 bbl. H. H. Weinert No. 2 Sprague, C N½ NE SE Section 4-2s-7e, McClosky pay 3,234-44 ft. and 3,247-57 ft., flowed 500 bbl. in 11½ hours through ½-in. choke. Carl Robinson No. 2 Joe Felix, C W½ NW SW Section 26-2s-8e, dry and abandoned at 3,459 ft., St. Louis lime was topped at 3,427 ft.

In Marion County, Texas Co. No. 5 S. McCoy, NW NE NW Section 33-2n-2e, McClosky 1,990-97 ft. and 2,008-25 ft., flowed 332 bbl. in 3 hours. Texas No. 3 F. Lazarette, NW SW SW Section 33-2n-2e, Benoist 1,787 ft., total depth 1,841 ft., flowed 30 bbl. in 3 hours. Texas No. 11 T. L. Easley, NE SE NW Section 33-2n-2e, Benoist 1,790 ft., Aux Vases 1,847 ft., total depth 1,875 ft., flowed 54 bbl. of oil in 3 hours. Texas No. 6 F. Miller, NW NE SE Section 32-2n-2e, Benoist 1,749 ft., flowed 140 bbl. in 3 hours from total depth of 1,805 ft. Texas No. 5 McConnonghiary B, NE SE SE Section 32-2n-2e, Benoist 1,787 ft., flowed 67 bbl. in 3 hours from total depth of 1,840 ft. Texas No. 1-A Dempsey Roadway, Benoist 1,737 ft., total depth 1,781 ft., pumped 24 bbl. in 3 hours. Sheppard No. 4 Grier, NW NE SW Section 30-2n-2e, Ste. Genevieve 2,047 ft., perforated with 78 shots at 2,086-2,100 ft., acidized with 1,000 gal. and 3,000 gal., pumped 200 bbl. Texas Co. No. 9 R. Shanafelt, NW NE NE Section 29-2n-2e, McClosky pay in streaks at 1,940-59 ft., 1,946-66 ft., and 1,988-2,002 ft., flowed 162 bbl. in 3 hours. Texas No. 8 R. Shanafelt, SW NE NE Section 29-2n-2e, McClosky pays 1,946-55 ft., 1,974-81 ft., and 2,000-22 ft., flowed 226 bbl. in 3 hours. Paul Rossi No. 4 Brooks, NW NE SW Section 29-2n-2e, Benoist 1,785 ft., Aux Vases 1,794 ft., total depth 1,864 ft., 70-qt. shot 1,810-60 ft., flowed 888 bbl. Texas Co. No. 16 N. Lee, NW SW SW Section 28-2n-2e, McClosky 1,942-2,036 ft., flowed 800 bbl. in 10 hours. Texas No. 13 J. Chapman, SE NW SW Section 28-2n-2e, McClosky pays at 1,982-2,000 ft., 2,003-16 ft., 2,034-41 ft., and 2,042-54 ft., flowed 107 bbl. in 3 hours. Texas No. 8 A. J. Chapman, NW NE SW Section 28-2n-2e, Benoist 1,783-20 ft., 20-qt. shot at 1,801-17 ft., pumped 40 bbl. in 3 hours.

Harvey and others No. 1-B J. L. Kagey, trustee, SE SE SE Section 33-3n-2e, McClosky 2,132-47 ft., pumped 200 bbl. of oil and 65 bbl. of water. No show was reported in the Aux Vases at 2,005 ft. Harvey and others No. 1-A J. L. Kagey, trustee, SE NE SE Section 33-3n-2e, McClosky 2,129 ft., perforated casing at 2,220-34 ft., acidized with 7,000 gal., pumped 200 bbl. of oil and 30 bbl. of water. Texas Co. No. 11 R. Fryke, NE NE SW Section 8-1n-2e, McClosky 2,031-54 ft., acidized witn 3,000 gal., pumped 27 bbl. in 3 hours. Ohio Oil Co. No. 10 R. L. Murray, SW NW SE Section 7-1n-2e, completed in the Benoist at 1,796-1,811 ft. and Aux Vases 1,842-89 ft., after shots of 10-qt. and 20-qt., respectively, for 100 bbl. on pump. Ohio Oil Co. No. 19 Floyd, SE NW SE Section 28-2n-2e, Benoist 1,794 ft., 40-qt. shot 1,807-35 ft., flowed 161 bbl. in 9½ hours. Ohio Oil Co. No. 15 Floyd, SE SW SE Section 28-2n-2e, Benoist 1,786 ft., 40-qt. shot 1,800-21 ft., flowed 356 bbl. Tomberlin No. 1 Young Strip, NE NE SE Section 20-2n-2e, Benoist 1,756 ft., shot with 30 qt. 1,804-27 ft., and with 40 qt. 1,750-92 ft., flowed 300 bbl. Texas Co. No. 18 N. Young, SE SE NE Section 20-2n-2e, Benoist 1,749 ft., Aux Vases 1,810 ft., McClosky 1,954-80 ft. and 2,026-40 ft., flowed 30 bbl. in 3 hours. Texas No. 17 N. Young, SE SE NE Section 20-2n-2e, McClosky 1,952-81 ft., 2,021-25 ft., and 2,027-31 ft., flowed 25 bbl. in 3 hours. Shell Oil Co. No. 3-A Young Heirs, SW SE SE Section 20-2n-2e, McClosky 1,940-58 ft., 2,000 gal. acid, flowed 1,005 bbl. Shell No. 1-B Young Heirs, NW NE SE Section 20-2n-2e, McClosky 1,913 ft., with pay at 1,946-66 ft., acidized with 4,000 gal., pumped 90 bbl. Magnolia Petroleum Co. No. 21 W. B. Young, SE SW NE Section 20-2n-2e, McClosky 1,917 ft., total depth 2,006 ft., acidized with 2,000 gal., pumped 177 bbl. Magnolia No. 44 J. H. Young, NE SE SE Section 20-2n-2e, McClosky 1,930-2,044 ft., acidized with 1,000 gal., flowed 1,440 bbl. Kingwood-Bell No. 14 J. O. Shanafelt A, NE NE NE Section 20-2n-2e, McClosky 1,975-2,022 ft., perforated 1,968-95 ft., swabbed 340 bbl. Potter Brothers No. 9 M.&I.R.R. A, NW NE SE Section 16-2n-2e, McClosky 2,063-2,100 ft., pumped 350 bbl. Potter Brothers No. 7 M.&I.R.R. A, NE SE SE Section 16-2n-2e, McClosky 2,072-2,108 ft., flowed 450 bbl.

Texas Co. No. 7 J. O. Richardson, SW SE NW Section 5-1n-2e, McClosky 1,916 ft., total depth 1,950 ft., flowed 301 bbl. Texas Co. No. 7 C. E. Richardson, NE NE SW Section 5-1n-2e, McClosky 1,930-42 ft., acidized with 3,000 gal., flowed 115 bbl. in 3 hours. Texas Co. No. 31 City of Centralia, SW SW NE Section 5-1n-2e, Benoist 1,786-47 ft., flowed 22 bbl. in 3 hours.

In St. Clair County, Shanafelt and others No. 1 Drehl, NW NW NW Section 3-1s-10w, Trenton lime 1,005 ft. with no show of oil, hole full of water at 1,050 ft., dry and abandoned at 1,060 ft. Ames Oil Co. No. 3 Gummershiner, NW NW NW Section 2-2s-10w, topped Trenton lime at 406 ft. and set 6-in. casing, used 1,000 gal. acid, pumped 30 bbl. of oil and 200 bbl. of water; total depth 432 ft. Crittendon and Nollkemper abandoned No. 1 Schroeder, C S½ SE NE Section 14-2s-10w, at 533 ft. in Trenton lime topped at 469 ft.

In Wabash County, Continental Oil Co. No. 1 A. E. Schultz, NE SE SE Section 25-2s-14w, McClosky 2,835-40 ft., with show of oil, dry and abandoned at 2,852 ft.

In Washington County, Shell Oil Co. No. 8 Holston, SE NW NE Section 22-3s-3w, Benoist 1,279 ft., shot with 10 qt. at 1,296-1,302 ft., pumped 102 bbl. Magnolia Petroleum Co. No. 2 J. Novak, SE NE SE Section 15-3s-3w, Benoist 1,248-70 ft., shot with 10 qt. 1,262-70 ft., pumped 32 bbl. Magnolia No. 1 B. Liszewski, SE NE SW Section 15-3s-3w, Benoist 1,295-1,304 ft., shot with 10 qt., pumped 22 bbl. of oil and 9 bbl. of water. Magnolia No. 1 E. McConnell, SE SW NE Section 15-3s-3w, Benoist 1,266-76 ft., shot with 10 qt., pumped 72 bbl.

In Jefferson County, Kingwood Oil Co. abandoned No. 1 C. E. Cook, C W½ SE SW Section 18-3s-4e, at 3,204 ft. The well had Aux Vases at 2,909 ft., Ste. Genevieve at 2,997 ft., and St. Louis at 3,004 ft.

In Perry County, Blankenship No. 1 Rutkowski, SE SE NE Section 13-4s-2w, was abandoned at 1,613 ft. The well had Benoist at 1,298 ft., Aux Vases at 1,358 ft., Ste. Genevieve at 1,420 ft., Rosiclair at 1,465 ft., Fredonia at 1,482 ft., and St. Louis at 1,610 ft. Hayes and others abandoned No. 1 H. F. Collins, SE SE SW Section 4-4s-1w, after making the location. Simmel No. 1 Kimiser, NW NE SE Section 5-5s-1w, abandoned location.

In Monroe County, Nettie Oil Co. No. 1 Martin Schuler, NW NW SE Section 11-2s-10w, Trenton lime 421 ft. with pay 435-61 ft., 1,000 gal. acid, pumped 40 bbl. of oil and 400 bbl. of water.

Wildcat First Reports

In Morgan County, Underwriters Oil Syndicate No. 1 U. M. Diller, SE cor. SE NE Section 13-13n-9w, shut down at 491 ft. after running 6⅝-in. casing at 491 ft. and having several shows of gas and water.

In Wayne County, Cayuma Corp. No. 1 Caldwell, C E½ NE SW Section 3-1s-8e, rig up. Hayes and Snydle No. 1 Murphy, NW NW NE Section 6-3s-9e, rig up.

In Wabash County, C. O. Neff, trustee, No. 1 Bump, NW NE NW Section 9-2s-13w, spudded 90 ft. Dallas Hawkins No. 1 E. Cowling, SE NE SE Section 18-2s-13w, spudded in.

In Edwards County, Ohio Oil Co. No. 1 Ben Edge, SW SW SE Section 22-2s-10e, rigging up rotary.

In Perry County, Pres Cochrane No. 1 Geacomo, NW NW NW Section 34-4s-3w, set surface pipe with machine and was moving in rotary tools.

In Jackson County, M. C. Trumbull No. 1 H. Bennett, C N½ NW NE Section 2-9s-5w, reported a show of oil at 137-42 ft., and was drilling at 355 ft.

In Williamson County, Reece and Roberts No. 1 Tom Arnold, C NW NE Section 21-10s-4e, rig up.

In Schuyler County, Feldheimer and Miller No. 1 Isaac Feldheimer, 315 ft. S line and 55 ft. W line, NE SE Section 2-3n-3w, drilling at 40 ft.

In Donough County, DeKalb Syndicate No. 1 John F. Welch, 255 ft. S line and 350 ft. W line of NW¼ Section 19-6n-2w, of the fourth principal meridian, drilling at 60 ft.

Wildcat Drill'ng Progress

John Menkin No. 1 Simmons, SE SE NE Section 11-8n-2w, Warren County, shut down at 1,060 ft.

In Tazewell County Morton No. 1 W. Strunk, NW NE SE Section 18-25n-3w, drilling at 1,300 ft.

In Shelby County E. E. Goad No. 1 Hoagiang, NW NW SW Section 14-9n-4e, spudded in.

In Moultrie County George Anderson No. 1 Ulrich, C W½ NW Section 29-15s-5e, Glen Dean 1,410 ft. and drilling 1,548 ft.

In Montgomery County Jack S. Brown and others No. 1 Hefley, SW SE SE Section 4-9n-3w, Cypress sand 780 to 810 ft., showed water and is drilling ahead. Southern & Petty No. 1 Sawyer, NE SE NE Section 15-8n-4w, spudded and shut down.

In Jasper County Thompson Drilling Co. No. 1 Union Central Life Insurance Co., SE SE SW Section 14-8n-10e, Glen Dean 1,937 ft. and drilling ahead at 2,130 ft.

In Ford County Nelson, Brown & Erp No. 1 Stroh, SE NE NW Section 19-24n-7e, getting ready to run casing at 466 ft.

In Effingham County Kingwood Oil Co. No. 1 McWhorter, C E½ SE NW Section 15-6n-6e, pumping 10 bbl. oil and 40 bbl. water daily from plugged-back depth of 2,986 ft. The well has a cumulative production of 270 bbl. of oil to May 30. It was formerly the deepest well in the state, being bottomed at one time at 6,543 ft.

In Edgar County Burkitt & Denson No. 1 W. J. Baum, SW NW NE Section 12-16n-14w, set 8-in. casing at 376 ft. and was drilling at 402 ft.

In Cumberland County Earl Robinson No. 1 S. H. Brown, SW NE SE Section 1-9n-10e, drilling at 1,000 ft.

In Richland County Kitchen & Wilson No. 1 Wilson, Section 13-3n-9e, Waltersburg at 2,645 ft. and drilling ahead at 2,970 ft.

In Marion County J. Booth and others No. 1 Gross, SW SW NW Section 34-3n-2e, Benoist at 1,999 ft. and coring at 2,014 ft.

In Lawrence County Joe Kesl No. 1 Jones, approximately in the center of Section 7-4n-10w, Kinderhook 2,580-2,733 ft. with shows of gas at 2,754 ft., 2,827 ft., and 2,867 ft. topped the Devonian at 2,890 ft. and drilling at 2,910 ft.

In Johnson County Tunnel Hill Oil Co. No. 1 J. Boner, C W½ SW NE Section 30-11s-3e, drilling at 1,250 ft.

In Jefferson County Shell Oil Co. No. 1 Jefferson Oil & Gas Co., NE NE SW Section 32-3s-2e, Fredonia 2,654 ft., McClosky 2,671 ft. and coring at 2,692 ft. Shendal and others No. 1 Sorenson, NE NE NW Section 5-2s-2e, total depth 2,193 ft. and underreaming at 2,130 ft. with casing at 2,125 ft. W. R. Curry No. 1 H. H. Peterson, SE SE SE Section 23-2s-1e, Glen Dean 1,647 ft., drilling at 1,680 ft. V. O. Lewis No. 1 Bates, NE NW NE Section 18-1s-1e, rigging up standard tools to drill deeper at 1,805 ft. I. Vawter No. 1 Kell, NW SW NE Section 9-1s-1e, pumped 105 bbl. oil and 210 bbl. water from total depth of 2,084 ft. Have casing at 2,071 ft. and will cement it there. McGee No. 1 Kaster, SW NE NE Section 9-1s-1e, drilling at 906 ft.

In Hamilton County Heimerich & Payne No. 1 Hamilton County Land Bank, SE SE SE Section 6-4s-7e, total depth 3,470 ft., have seven joints of pipe lost in hole and are shut down for orders.

(Continued on Page 77)

CENTRAL OHIO

FINDLAY, Ohio, July 10.—A 3,200,000-cu. ft. gas well was completed in the Mayfield Village pool in Cuyahoga County. The St. Peter test in Adams County was abandoned after striking a heavy flow of Blue Lick water.

Athens County, Canaan Township, A. J. Looley No. 1 John W. Marshall, Section 8, has 65,000 cu. ft. of gas from the second Berea at 1,410-27 ft. Ames Township, Carpenter & Glazier No. 1 J. B. Trash, Section 1, is dry in the first Cow Run sand, total depth 366 ft.

Cuyahoga County, Mayfield Township, Benedum & Trees No. 1 J. Killaran, Lot 34, is a gas well in the Newburg gaging 3,200,000 cu. ft., sand 2,773-2,813 ft.

Jackson County, Washington Township, Kelch Brothers No. 1 R. E. Leasure, Section 10, is a small gas well in the Hamden sand at 576-84 ft.

Licking County, Newton Township, Allen Willey No. 3 Homer Van Wey,, southeast part of fourth quarter, has an open flow of 3,400,000 cu. ft. of gas from the Clinton sand at 2,744-70 ft. Madison Township, Bebout & Sons No. 1 Horatio Holtz, Section 4, gaged 790,000 cu. ft. open flow from the Clinton sand at 2,618-46 ft.

Lorain County, Pittsfield Township, Ohio Fuel Gas Co. No. 1 Prudential Life Insurance Co., Lot 139, is good for 220,000 cu. ft. of gas open flow, Clinton sand 2,246-67 ft.

Medina County, Chatham Township, Swan & McDevitt No. 20 L. L. Eaken, Lot 22, Tract 16, is a 2-bbl. pumper in the Berea at 348-63 ft. Harrisville Township, H. L. Pearsall No. 7 W. P. White, Lot 17, was dry in the Berea sand, total depth 484 ft.

Meigs County, Rutland Township, Ball Run Gas Co. No. 1 Herbert Whaley, Section 3, found 240,000 cu. ft. of gas open flow in the Salt and Maxon sands, total depth 856 ft.

Monroe County, Seneca Township, Barnesville Development Co. No. 1 Otto Carpenter, Section 18, was dry and abandoned at 1,875 ft. Franklin Township, Lucas & Thornberry No. 6 M. I. Hanson, Section 3, is a small gas well in the Berea sand at 1,992-2,005 ft.

Muskingum County, Monroe Township, D. Y. M. Corp. No. 8 Thomas Bell, Section 3, is pumping 2 bbl. of oil per day from the Berea sand at 1,146-72 ft.

Noble County, Jackson Township, Skinner & Co. No. 1 E. J. Dixon, Section 22, was abandoned at 1,100 ft.

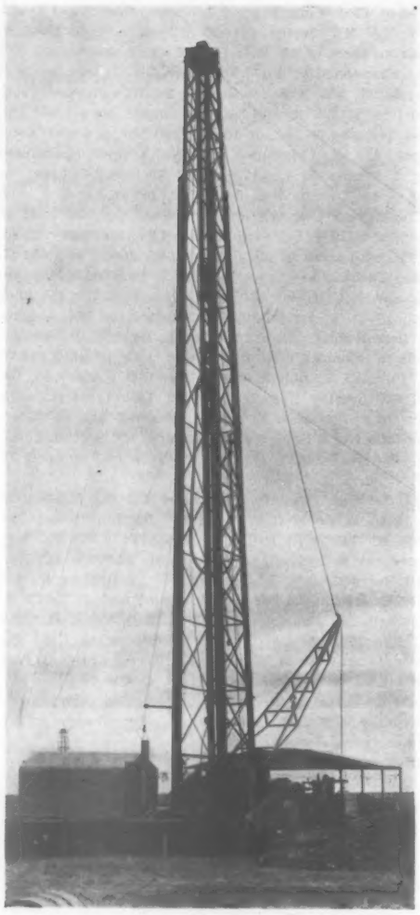
A New BREWSTER PORTABLE RIG moves to Kansas

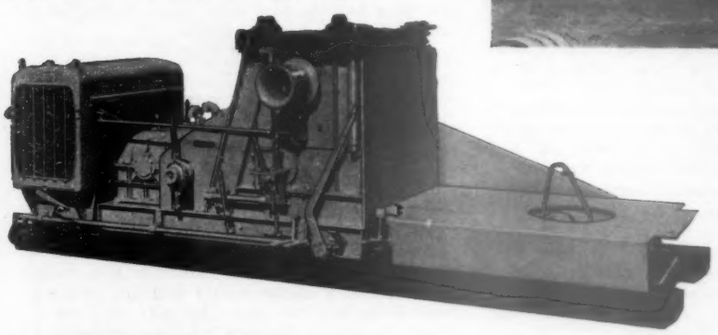
Pictured here on a location near Russell, Kansas, is one of the latest portable rigs developed by our engineers. Several such Brewster Rigs are now drilling in other Kansas and Illinois fields.

The rig is of a unique design, having engine, 4-speed oilbath transmission, draw works and oilbath rotary all mounted on one set of skids. The pump and pump engine are mounted on an entirely separate set of skids.

The derrick is of the one-piece mast type, and is quickly and easily raised to position by the mast shown suspended over the engines and pump. This mast is furnished as standard equipment with the rig.

With a Brewster Portable Rig like this, you can start drilling only six hours after the equipment has arrived on location.





This particular rig is known as Model CR-200 and is capable of drilling to 4,000'. Other Brewster portable rigs are made for drilling up to 6,000'. Write for complete information or turn to our section in the Composite Catalog or the Drilling Equipment Directory.

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with tools in the hole. Seneca Township, Mud Run Oil Co. No. 1 Jane Bates, Section 24, had a small gas showing in the Berea at 1,420-21 ft.; abandoned at 1,444 ft.

Perry County, Reading Township, Kissling Drilling Co. No. 1 Homer Wendall, Section 36, found water in the Berea sand, total depth 925 ft.

Lima Field

The test of the Tira Syndicate in Sinking Springs area in Adams County was abandoned at 2,165 ft. after encountering a hole full of water in the St. Peter sand. The test was located in Franklin Township on Thomas Tira farm, north of Potato Knob on Straight Creek. The corrected log places the Trenton at 1,467-2,108 ft., and the St. Peter and Blue Lick water at 2,135-2,162 ft.

The Sun Oil Co. No. 1 H. M. Cross in Section 13, Plain Township, Wood County, struck more water at 2,060 ft.; now drilling at 2,095 ft. with 1,400 ft. of salt water in the hole. Formation is very hard, showing half sand and half lime, making only 2 ft. of hole every 12 hours.

INDIANA

EVANSVILLE, Ind., July 10.—Indiana had six oil completions, three tests abandoned, and four new operations in proven or semiproven areas. There were 55 tests classified as drilling although some of these are shut down or temporarily abandoned, and 11 rigs up. Gibson County was the most active area with 16 drilling wells reported, 2 completions, 2 abandonments and 1 start. Posey County had seven drilling, two completions, and two new tests. Initial production of new wells was 913 bbl.

Completions in the state follow:

In Knox County, Richter and Williams No. 1 Montgomery, C NE SW Section 28-5n-4w, abandoned.

In Gibson County, C. M. Lane No. 1 McCarthy, SE SE NW Section 13-2s-11w, dry and abandoned. Continental Oil Co. No. 1 Cooper, SE SW SE Section 12-3s-14w, pumped 288 bbl. in 23 hours. with no water showing from 2,869-81 ft. Hollandsworth and Bander No. 2 Boone Cooper Heirs, NE NW SE Section 13-3s-14w, Glen Dean 2,250 ft., cored 2,865-77 ft., tested 106 bbl. on pump with 40 per cent water showing. Hollandsworth and Bander No. 3 Hughes-Cooper, S½ SE NE Section 13-3s-14w, Ste. Genevieve 2,801 ft., pumped 76 bbl. of oil and 10 bbl. of water, total depth 2,867 ft. Hollandsworth and Bander No. 1 Thompson-Cooper, SE SE SE Section 13-3s-14w, abandoned location.

In Posey County, Superior Oil Co. No. 1 New Harmony Realty Co., NE NW SW Section 10-5s-14w, Ste. Genevieve 2,922 ft., oolitic 2,967-73 ft., plugged back to sand 2,180-2,219 ft., 273 bbl. production and no water, with 60 lb. pressure on tubing. Sun Oil Co. No. 2 Heil, NW SE SE Section 1-7s-12w, show of oil 1,768-98 ft. and 1,878-91 ft., produced 158 bbl. in 12 hours from both sands after 20-qt. shot.

In Spencer County, B. K. Maitland No. 1 Grass, SW NW NE Section 11-6s-4w, sand 832-42 ft. with show of oil at 834 ft., 12 bbl. after shot, with no water showing.

New work included D. L. Morris and others No. 1 Nikom, C S½ NW NW Section 4-2n-4w, a test to the Ste. Genevieve.

In Gibson County, Lewis Production Co. No. 1 Cooper B, SW NE SE Section 12-3s-14w, was rigging up rotary. Hollandsworth and Bander No. 5 Hughes-Cooper, 1,320 ft. S and 20 ft. E line of Section 13-3s-14w, had rig up.

In Vanderburgh County, K. R. Bixby No. 3 Glaser, C W½ W½ NW Section 31-5s-11w, was a location.

In Posey County, Sun Oil Co. No. 1 Dietz, SW SW SE Section 17s-12w, old well drilling deeper from 1,756 ft., drilling at 1,812 ft.

In Spencer County, Kentucky Natural Gas Co. No. 1 Afton, C NE NE Section 30-7s-6w, was a location.

WESTERN KENTUCKY

OWENSBORO, Ky., July 10.—Three oil wells, one gas well, and nine dry holes were completed in western Kentucky in the past week. Todd County is receiving much attention from oil companies and individuals who have leased many thousand acres in the county. Two wells are drilling in Todd, and a machine is being moved in for a McClosky test. The best well of the week in the western Kentucky district was a 50-bbl. completion in Barlow sand. Following are the completions and new operations:

Breckinridge County, Cloverport district: F. A. Tur-

(Continued on Page 102)

Kansas Developments

By
DAL DALRYMPLE

Medicine Lodge Well Flows 25 Bbl. an Hour in Misener

Development of Misener sand production in the Medicine Lodge field, Barber County, was a feature of field activity in Kansas the past week—a 7-day period that saw a new pool opened in Russell County and extensions recorded at several other productive areas in the state.

Barbara Oil & Gas Co. No. 3-A Holmes, CNL SE Section 15-33-13w, Medicine Lodge field, flowed 45 bbl. of oil an hour during an 8-hour test after being deepened to 4,865 ft. in Misener sand topped at 4,858 ft. It previously had flowed at the rate of 25 bbl. an hour when drilled to 4,862 ft. Operators were preparing for potential test. Location is ¼ mile northwest of the only other Misener sand producer in the area, the Barber company's No. 1-A Holmes, completed in March, 1937, for 441 bbl. of oil daily from Misener sand at 4,845-47 ft. Gas production in the field is from chat at around 4,440-50 ft.

Phillips Petroleum Co. opened a producing area at No. 1 Maier, SW SW NE Section 15-15-14w, about 10 miles south of Russell in Russell County. It found Arbuckle lime at 3,249-57½ ft., total depth, and oil rose 2,800 ft. in the hole after plug was drilled in 7-in. casing set at 3,249 ft. The crew was preparing for a production test. It is 1¼ miles northwest of the Trapp field.

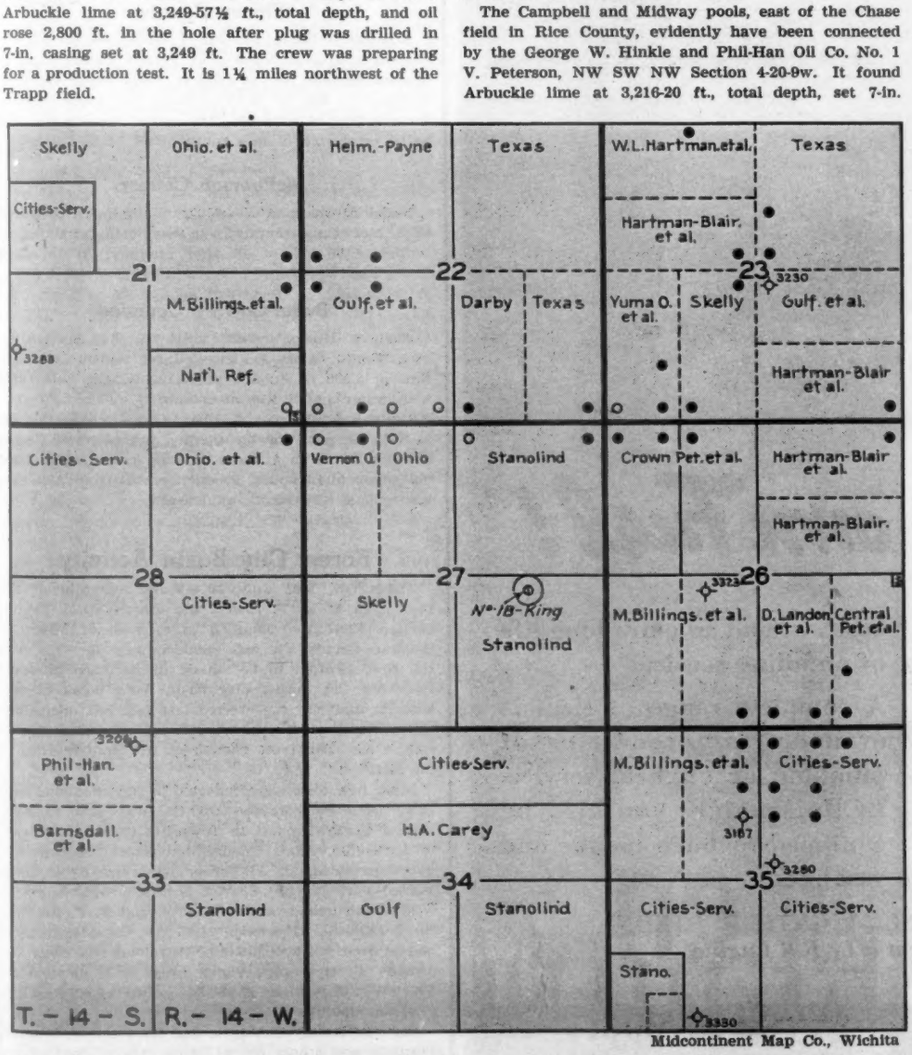
The Gurney pool in Russell County was extended ½ mile southward at Stanolind Oil & Gas Co. No. 1-B CNL SE Section 27-14-14w, bottomed at 2,980 ft. in Lansing-Kansas City lime series. It swabbed 2½ bbl. of oil an hour naturally, was acidized and due for test.

Discovery of a Lansing lime pool 1 mile northwest of the Prusa pool in Barton County was indicated at M. B. Armer, Vernon Oil & Gas Co. and others No. 1 Hoffman, NW NW SW Section 18-16-11w. It swabbed 10 bbl. of oil an hour for 24 hours from Lansing lime at 3,214 ft., total depth, after acid treatment with 1,000 gal. It was expected to be reacidized with 2,000 gal. for another test.

The Chase pool in Rice County was extended ½ mile northward on the west side at Derby Oil Co. and Carey Drilling Co. No. 1 Link, SW NW SE Section 19-19-9w. It is about 2½ miles north of the town of Chase. Arbuckle lime was topped at 3,266 ft., total depth 3,291 ft., and it swabbed 5 to 8 bbl. of oil an hour. Potential test had not been made.

The Campbell and Midway pools, east of the Chase field in Rice County, evidently have been connected by the George W. Hinkle and Phil-Han Oil Co. No. 1 V. Peterson, NW SW NW Section 4-20-9w. It found Arbuckle lime at 3,216-20 ft., total depth, set 7-in. casing at 3,216 ft., and oil rose 2,700 ft. in the hole in 8 hours after plug was drilled. Tankage was being erected for pumping test.

The Cowley County discovery well, H. H. Blair, W. L. Hartman & Arthur Brewer No. 1 Brown, SE SE NW Section 33-30-4e, north of the Hittle pool, flowed 25 bbl. of oil an hour on recent flowing and swabbing test. Gravity of the oil was 39.6°. Production was from Arbuckle lime at 3,279-80 ft., total depth. Bomb potential test was planned. Gulf Oil Co. was reported rigging up at No. 1 Raymond, NE NE SW Section 33, south offset.



Midcontinent Map Co., Wichita

The Gurney area in Russell County was given an extension at Stanolind Oil & Gas Co. No. 1-B, Section 27-14-14w, ½ mile south of the Gurney pool

Wildcat Completions

Nelson Drilling Co. No. 1 Hodge, NW NW NE Section 25-20-6w, wildcat in eastern Rice County, classed as extensioner of the Barnholt pool of McPherson County, was completed for 24-hour potential of 442 bbl. of 36.7-gravity oil. It found Mississippi pay at 3,301-36 ft., total depth, was acidized with 1,000 gal. and pumped 147 bbl. of oil in 8 hours.

Austin Reed and others No. 1 Sowder, SE SE NW Section 31-25-13, opened a new oil area in Greenwood County. It pumped 25 bbl. of 36-gravity oil in 24 hours from Burgess sand pay at 1,587-97 ft., total depth.

Bradley Oil Co. No. 1 Ruhl, C E½ NE NE Section 24-19-10w, Rice County wildcat, found Arbuckle lime at 3,316 ft., total depth 3,352 ft., and was dry and abandoned. A slight showing of oil was found at 3,223-30 ft.

Tide Water Associated Oil Co. and Ward McGinnis No. 1 Junghanns, SE cor. Section 23-18-5, wildcat in Marion County, was dry and abandoned at 2,303 ft., total depth, after failing to find production in Arbuckle lime topped at 2,226 ft.

United Production Co. No. 1 Illinois, NW NW SE Section 31-29-34w, wildcat in the Haskell County sector of the Hugoton gas field, was completed at total depth of 2,727 ft., with pay topped at 2,614 ft. It gauged 31,000,000 cu. ft. of gas daily.

Estimated Daily Production

Estimated daily production for Kansas for the week ending July 8, and for the preceding week, was as follows:

	Barrels	
	July 8	July 1
Oxford City	850	875
Burrton	9,900	9,975
Ritz-Canton	5,550	5,600
Graber	2,200	2,200
Hollow-Nikkel	2,600	2,625
Lerado	1,075	700
Voshell	1,550	1,575
Wellington	1,950	1,975
Ellsworth County:		
Lorraine	1,450	1,525
Other pools	945	1,610
Rice-Barton counties:		
Bloomer	2,400	2,625
Chase	3,750	4,675
Geneseo	3,175	3,150
Raymond	575	475
Silica	10,550	10,975
South Silica	1,600	1,925
Keesling	700	1,050
Wherry	2,150	3,125
Miscellaneous Rice	8,110	7,265
Miscellaneous Barton	10,835	12,635
Russell County	25,600	23,350
Sedgwick County	3,425	3,575
Ellis:		
Bemis	6,575	6,575
Miscellaneous	3,660	2,245
Kingman County	530	675
Stafford County	6,360	7,860
Greenwood County	9,200	9,050
Butler County	17,625	17,750
Other fields	22,710	21,460
Total Kansas	167,600	169,100

Ellis County

Darby Petroleum Corp. No. 2 Henderson, NE NE NW Section 7-11-17w, South Burnett pool, Ellis County, pumped 855 bbl. of oil in 8 hours after acid treatment

and made 24-hour potential of 2,566 bbl. Production was found in Arbuckle lime at 3,465-74 ft., total depth.

Dickey Oil Co. No. 1-B Henderson, SE cor. Section 6-11-17w, had Arbuckle lime at 3,471-73 ft., total depth, and 3,000 ft. of oil rose in the hole in 4 hours. It was acidized with 3,000 gal., made depthograph potential of 7,078 bbl. of oil, and was given maximum rating of 3,500 bbl. daily.

In the Bemis field, Cities Service Oil Co. No. 10 Rumsey, NE NW SE Section 23-11-17w, found Arbuckle lime at 3,412 ft., and at total depth of 3,418 ft. oil rose 2,880 ft. in the hole in 4 hours. It was completed for maximum potential of 3,500 bbl. of oil.

Shell Oil Co. No. 18 Rumsey, SW NW NE Section 23-11-17w, had Arbuckle lime at 3,375-85 ft., total depth, swabbed 265 bbl. of oil in 4 hours, and was completed for 500 bbl. of oil daily.

Central Petroleum Co. No. 4 Hadley, NE NE SE Section 12-11-18w, South Burnett area, found Arbuckle lime at 3,353-58 ft., total depth, oil rose 3,000 ft. in the hole in 1½ hours and it made depthograph potential of 2,221 bbl. of oil.

Russell County

Coralena Oil Co. No. 2 Dumler, NE NE NW Section 26-15-14w, Trapp field, Russell County, made echometer potential of 1,826 bbl. of oil and was completed in Arbuckle lime at 3,292-3,317 ft., total depth. Oil rose 2,900 ft. in the hole in 5 hours.

Wolf Creek Oil Co. No. 2-B Rouback, NE NE NW Section 15-14-15w, found Gorham sand pay at 3,244-52 ft., total depth, pumped 504 bbl. of oil in 8 hours and made daily potential of 1,514 bbl.

Barton County

Stanolind Oil & Gas Co. No. 11-A Schartz, C W½ W½ NW Section 2-20-11w, Silica field, Barton County, pumped 539 bbl. of oil in 8 hours from Arbuckle lime at 3,279-91 ft., total depth, making 24-hour potential of 1,618 bbl.

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Shell Oil Co. No. 4-B Bitter, SW SE SE Section 6-16-13w, South Trapp area, was completed for echometer potential of 2,463 bbl. of oil, with 537 bbl. of water. It topped Arbuckle lime at 3,357 ft., total depth 3,366 ft., and pumped 87 bbl. of oil and 65 bbl. of water in 12 hours.

Rice County

H. B. Garden and others No. 6 Oden, C W½ E½ NW Section 5-21-7w, Wherry pool, Rice County, found pay in conglomerate at 3,323-36 ft., total depth, pumped 274 bbl. of oil in 8 hours and made daily potential of 823 bbl.

In the Lyons gas area, Shell Oil Co. No. 1-A Welsh, SW SW NW Section 1-20-8w, topped Simpson sand at 3,389 ft., had water in the hole at 3,428 ft., total depth, and was abandoned.

Stafford County

Three producers were completed in the Zenith field, Stafford County. Stanolind Oil & Gas Co. No. 2 McComb, C S½ SW SW Section 12-24-11w, had Viola lime pay at 3,760-61 ft., total depth, flowed 86 bbl. of oil in 4 hours and made bomb potential of 446 bbl.

Same company's No. 10 Hartnett, N½ NW NW Section 13-24-11w, was acidized with 2,000 gal., and flowed 26 bbl. of oil in 8 hours from pay at 3,771-72 ft., total depth.

Sinclair Prairie Oil Co. No. 10 Krey, N½ NE NE Section 14-24-11w, found pay at 3,772-72½ ft., total depth, flowed 210 bbl. of oil in 8 hours and made potential of 463 bbl.

Sumner County

Champlin Refining Co.'s well in S½ NW SW Section 9-30-2w, Latta pool, Sumner County, was acidized and pumped 75 bbl. of oil in 24 hours from Lansing lime at 3,206-17 ft., total depth, completed.

Finney County

Atlantic Refining Co. No. 1 Gobleman, C NE SE Section 27-21-34w, Nunn pool, Finney County, topped Mississippi lime pay at 4,652 ft., total depth 4,679 ft., pumped 214 bbl. of oil in 14 hours, and made echometer potential of 1,724 bbl. The second well in the pool to be completed, it is a south offset to the discovery well.

McPherson County

Nadel & Gussman No. 7 Drum, in the Ritz-Canton field, McPherson County, was completed for daily potential of 90 bbl. of oil after pumping 30 bbl. in 8 hours from Mississippi pay at 2,910-44 ft., total depth.

Butler-Cowley Counties

Adair & Morton's well in SE NW SW Section 14-28-7, Brandt area, Butler County, topped Arbuckle lime at 3,092 ft., total depth 3,127 ft., the hole filled with water and it was abandoned.

McKnab & Blair No. 4 Hittle, SE SE NE Section 21-31-4, Hittle pool, Cowley County, pumped and flowed 834 bbl. of oil in 8 hours, making potential of 2,504 bbl. of oil in 24 hours. Production was from Arbuckle lime pay at 3,269-99 ft., total depth.

Forest City Basin Activity

TRENTON, Mo., July 10.—Work was started the past week at H. V. Elwell and others No. 1 Taylor, Section 12-62-21w, about 5 miles west of Milan in Sullivan County. It was spudded July 6. This was the first location to be staked in northern Missouri following the Forest City basin lease boom of last summer and rig was erected last fall, but operations were delayed until titles were cleared and lease blocks completed. Three oil companies are contributing to the test.

Other new tests were reported in Ray, Schuyler and Adair counties. Mayson Oil Co. was said to have started work at a test in Township 63-14w, northeast of Kirksville, Adair County, but exact location was not ascertained. J. A. Turner was reported to have started work at No. 1 Craven, Section 10-52-29w, northwest of Richmond in Ray County; and T. E. Baldwin No. 1 Johnson, NE Section 21-65-15w, Schuyler County, had started work. Buttram Petroleum Co. was expected to start work right away at a location in SW SW SE Section 35-53-18w, south of Keytesville, Chariton County.

Eastern Grundy County is due for a test at Warren Franklin and others No. 1 Vencil, NE NE Section 20-62-22w, about 12 miles northeast of Trenton, and about 10 miles southwest of the Elwell wildcat in Sullivan

County. Pits have been dug. Same operators also were expected to start drilling at No. 1 Harding, Section 22-62-21w, Sullivan County, within 60 days. It is southwest of the Elwell No. 1 Taylor test.

Bob Miller and associates were due to spud within the next 2 weeks at a location in SE Section 24-57-35w, east of St. Joseph, Buchanan County.

Davis Brothers and others No. 1 Gee, NW NW SE Section 28-60-35w, in the Savannah area, Andrew County, was to be drilled ahead to Arbuckle lime, expected at around 2,500 ft., after getting a hole full of fresh water at 1,080 ft. A slight showing of oil was reported in Bartlesville sand at 995-1,015 ft.

E. F. Slater and others No. 1 Sayre, NE NW SE Section 14-65-18w, southeast of Unionville in Putnam County, was reported dry and abandoned at 1,700 ft. It was expected the operators would start another test in that district soon.

The first test at which drilling was started in Missouri during the present activity, J. H. Everitt and others No. 1 Spring, SW SW SE Section 30-62-38w, near Mound City in Holt County, again held interest at the weekend. Although operators have withheld definite information on the wildcat, it was reported bottomed at 2,800 ft. in limestone. It was reported that it was to be acidized with 2,000 gal. preparatory to testing, the acid having been ordered from Wichita. Several showings of oil and gas have been reported unofficially at this time.

Illinois Fields

(Continued from Page 73)

In Gallatin County Kingwood Oil Co. No. 1 Egyptian Fuel & Lumber Co., C N½ NE SW Section 15-8s-10e, spudded in.

In Franklin County M. & G. Drilling Co. No. 1 Franklin Realty Co., NE NE SE Section 26-6s-3e, had drill pipe stuck at 2,962 ft. after getting the Fredonia at 2,950 ft.

In Crawford County Downey and others No. 1 W. N. Cochran, SE SE NW Section 12-5n-12w, show of gas at 500 ft. and at 890 ft. where the well was shut down.

In Coles County East Oakland Syndicate No. 1 Temple, SW SE NE Section 36-14n-10e, drilling at 1,740 ft.

In Clinton County Elmer Goldschmidt No. 1 Burger, NE NE NW Section 12-2n-4w, odor of gas 1,255-58 ft.; operators getting ready to run 6⅝-in. casing.

In Marion County Witcher Development Co. No. 1 Monken, NE NE SE Section 3-1n-2w, shut down for orders at 1,325 ft. with possibility well may be drilled deeper.

In Clark County Patmin Production Co. No. 1 Ingersoll, NW SW SE Section 29-4n-14w, spudded in 60 ft. George B. Sherrit No. 1 S. Turner, SE SW NW Section 14-11n-14w, shut down for repairs at 365 ft. Jinks No. 1 W. A. Johnson, SW NW NW Section 36-10n-14w, shut down at 450 ft.

In Champaign County Sadarus Oil Co. No. 1 Nagle, SE SE SE Section 31-18n-8e, was moving out standard tools and moving in rotary at a total depth of 600 ft.

In Bond County Bialock No. 1 J. J. Dilman, SW SE SW Section 13-6n-2w, topped the Ste. Genevieve at 1,270 ft. and was drilling at 1,300 ft. Jenkins and others No. 1 White, SW SE NW Section 17-5n-4w, drilling below 200 ft.

In Adams County L. C. Robinson No. 1 W. E. Fowler, NE SE SE Section 12-2n-5w, shut down at 1,003 ft.

In Williamson County Roy Shipman and others No. 1 Chamness, NW SW SW Section 21-9s-2e, shut down at 1,363 ft.

In White County A. C. Wilson and others No. 1 Bayley Dagley, SE SE SW Section 12-7s-9e, waiting on cement. Eason Oil Co. No. 1 Starns heirs, SW SE SW Section 14-6s-9e, tested 3,000,000 cu. ft. of gas from plugged-back depth of 2,234 ft. Casing pressure closed in was 900 lb. and open 275 lb. The tubing and bit were still in the hole. Palmer Corp. No. 1 Carmi Baptist Orphanage, NE SE SE Section 22-5s-9e, pumped 75 bbl. of fluid with 15 bbl. oil and the remainder water. The total depth was 2,882 ft. and the operators were continuing to test. Chisom No. 1 T. E. Boultinghouse, C W½ SW SW Section 10-4s-14w, Glen Dean at 2,310 ft. and drilling at 2,436 ft. J. Liggett No. 1 Matilda Hon, NE NW SE Section 32-3s-14w, total depth 2,988 ft., and was continuing to test. Anding & Nation No. 1 Belva-McIntosh, C SE SW Section 31-3s-8e, pumped and flowed 154 bbl. from 3,405 ft. Kingwood Oil Co. No. 1 Tullis, C E½ NE NE Section 29-3s-8e, drilling at 2,000 ft.

In Wayne County Evan Davis No. 1 Fuse Littel, NE NE NE Section 17-3s-9e, drilling at 2,860 ft. Iroquois Oil & Gas Co. No. 1 Phillip Walker, SW SW SW Section 9-3s-9e, Fredonia at 3,393 ft., and was waiting on cement at 3,455 ft. Illinois Mid-Continent Oil Co., NW SE NE Section 3-3s-8e, had rig up.

Corley and others No. 1 Clarence Draper, SE NW NE Section 15-3s-6e, spudded and shut down. Hunt No. 1 Harper, NE SE SW Section 3-3s-6e, had rig up. Porter Oil Co. No. 1 Kienicke, NE SE SW Section 15-2s-9e, had drill pipe stuck at 3,316 ft. after getting the St. Genevieve at 3,213 ft. Carl Robinson No. 1 Carter, SE NE NW Section 15-2s-8e, total depth 3,360 ft., perforated with 18 shots at 3,290-96 ft., bailed show of oil and water, squeezed and was waiting on cement. Pioneer Drilling Co. No. 1 Cuthbertson, NW SE NE Section 33-2s-7e, was drilling at 2,080 ft. H. H. Weinert No. 1 Carlten, SE NW SE Section 28-2s-7e, set 73 ft. of 10-in. casing. Albright No. 1 Collins, NW NW SE Section 24-1s-9e, drilling at 209 ft.

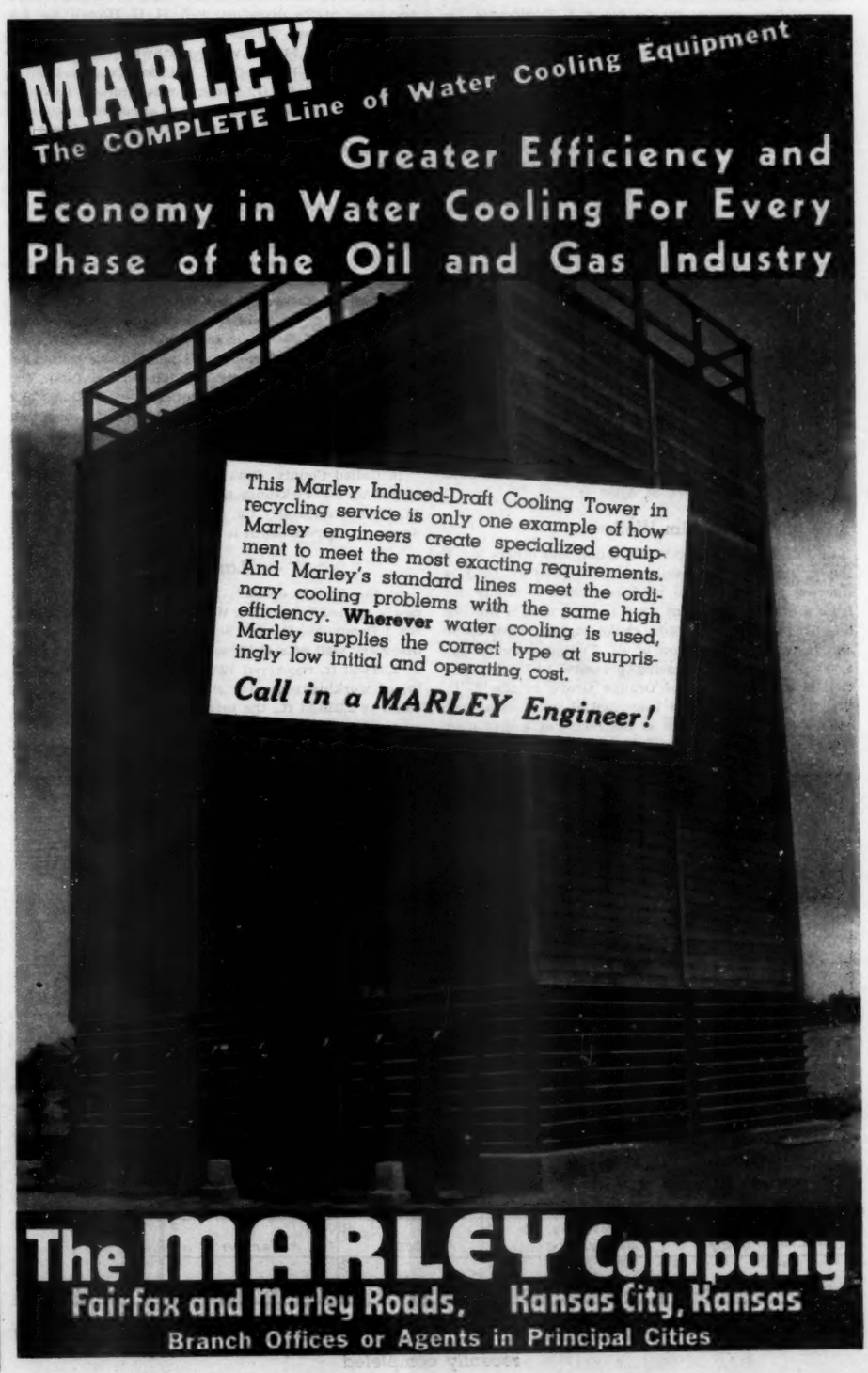
In Washington County Lewis Lilly No. 1 Gill & Goodner, NE NW SW Section 23-3s-3w, shut down at 1,257 ft. Pat Hardman No. 1 Rozanski, SW NW SW Section 19-3s-1w, drilling at 330 ft. Max Conrey No. 1 Joint Stock Land Bank, SW SW NE Section 7-2s-4w, Benoist 1,090 ft. and drilling at 1,200 ft.

In Wabash County Mammoth Producing & Refining Co. No. 1 Dunn, NE SW SW Section 25-2s-14w, Glen Dean 2,267 ft. and drilling at 2,280 ft. Hughes No. 1 Tanquary Bros., SW SW NE Section 30-1s-13w, drilling at 2,575 ft.

In St. Clair County McIlvain No. 1 McNulty, SW SW SE Section 32-2n-7w, drilling at 1,055 ft.

In Saline County Hapenny No. 1 Swinnery, SW SW NW Section 1-9s-7e, drilling at 2,250 ft. Coast Production Co. No. 1 Choisser, NE NW NW Section 5-8s-7e, shut down for orders at 2,043 ft. Palacine and others No. 1 Old Ben Coal, NW NE NE Section 4-5s-2e, had Ste. Genevieve at 2,752 ft., and the Fredonia at 2,835 ft., ran drill-stem test at 2,843-55 ft. and recovered sulfur water, drilling at 3,036 ft.

In Edwards County McFadden No. 1 Bump, NE SE SW Section 34-2s-14w, drilling at 1,460 ft.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Southwest Texas District

By
F. L. SINGLETON

Deeper Sand in Minnie Bock Field Promising Production

CORPUS CHRISTI, Tex., July 10.—Testing of a deeper sand in the newly-opened Minnie Bock field, Nueces County, and prospects of opening another shallow field in Webb County, held attention of operators in the Southwest Texas district.

Texas Conservative Oil Co. No. 1 J. E. Humble, approximately 3,000 ft. northeast of production in the Minnie Bock field, Nueces County, showed promise of production from a deeper sand when it flowed at the rate of 5 bbl. of fluid per hour of which 20 per cent was oil and the balance salt water. The test was made through perforated casing at 5,658-63 ft., and this section will be retested after a cement squeeze job is made. The well was drilled to a total depth of 6,010 ft., and 5½-in. casing was cemented at 5,960 ft. after an electrical survey showed two possible sand sections at 5,655-64 ft. and 5,906-09 ft.

In the field proper two wells were in the process of completion in the 3,800-ft. sand. Buchanan Production Co. and others No. 2-C Gandy recovered 32 thribbles of pipe line oil and a small amount of salt water on a drill-stem test at 3,820-30 ft., and casing was cemented on bottom at 3,830 ft. Awoeb Oil Co. and others No. 1 Minnie Bock cored oil sand and casing is being cemented.

In the same county, one wildcat was abandoned and another had reached the contract depth with no showings of oil or gas reported. Texas Conservative Oil Co. No. 1 J. E. Wright, 3 miles southeast of Robstown was quit at 6,010 ft., while southeast of Corpus Christi Mills Bennett Production Co. No. 1 Poenisch is shut down waiting on orders at 6,000 ft.

Jim Wells

In Jim Wells County, W. R. Quinn and others No. 1 Pundt, the discovery well of the Wade City field is showing for a distillate producer while it cleans out from a production test at 4,810 ft. The well is flowing into the pits through a ⅛-in. choke, making wash water and gas with a slight show of oil. Tubing pressure was 1,600 lb. and shut-in casing pressure 1,675 lb. The well is 3 miles north of Orange Grove in the T. C. Wright Survey, and has been looked upon as a pool opener for several weeks as the result of a drill-stem test at 4,739-45 ft. However, this section was not tested, and it is possible the hole may be plugged back and a test made of the section which was logged as a distillate sand.

Two outpost wells in the Ben Bolt field, Jim Wells County, were abandoned as dry. Approximately 1 mile northwest of the discovery well, H. H. Howell No. 1-A Lindsay & Reed, Teresa Bustillos Survey No. 3, was abandoned at 5,740 ft., while northwest of production, about 5,000 ft., Pettus Oil & Refining Co. No. 1 R. V. De Garcia, S.A.&M.G. Survey, was quit at 6,020 ft. In the field proper, production was apparently extended a short distance to the south, as Calloway & Reese are running casing in No. 2 Smith. Sand showing oil was cored in the discovery horizons at 5,256-91 ft., and an electrical survey is reported to have shown favorable indications in a lower sand at 5,376-88 ft.

In the same county, about 1 mile due east of the discovery well in the La Gloria field, Magnolia Petroleum Co. has cemented 7-in. casing on bottom at 6,814 ft. in No. 1 Dale O. Maun. The well has shown gas and distillate on several drill-stem tests, but according to a laboratory analysis, the most promising sands appear to be at 6,794-95 ft. and at 6,800 ft. An analysis of the 6,700-ft. sand showed 9.8 per cent saturation by porous space, 12.6 porosity and 120 permeability. The 6,800-ft. sand showed 7.7 per cent saturation, 25.2 porosity, and 540 permeability. This is the second well drilled in the field which was opened as a distillate pool the first of the year.

In Goliad County, Crown Central Petroleum Co. has rigged up for Vicksburg test on the Wood lease, Block 11, Keystone Royalty Co. subdivision in the John Sear Survey. Contract depth is 5,100 ft.

Laredo

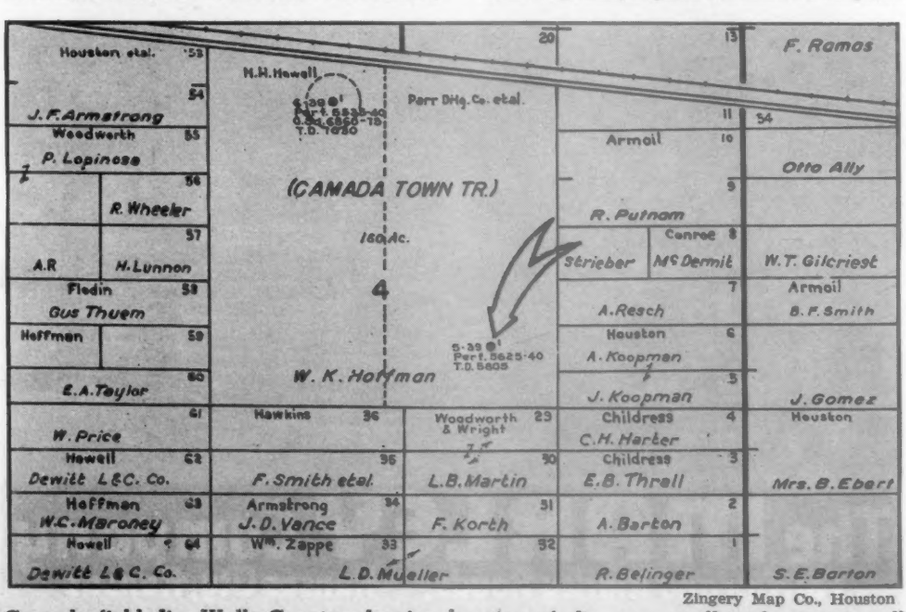
In the Laredo district, 1½ miles southwest of the newly opened Volpe field, Webb County, V. G. Schimmel No. 1 Benavides, B.S.&F. Survey No. 693, loomed as the discovery well of a field, as a 30-minute drill-stem test at 2,335-50 ft. recovered 130 ft. of pipe line oil and 11 lb. of working pressure. Sand with an oil odor was cored at 2,336-54 ft., the total depth. Seven-inch casing was cemented on bottom.

In the Volpe field, Magnolia Petroleum Co. completed No. 6 Volpe as the second producer in the field. On a 12-hour gage the well pumped 35 bbl. from sand at 2,473-78 ft., total depth.

The Rincon field, Starr County, was defined to the northeast by abandonment of Baldridge & Vessels No. 1 W. I. Cameron, ½ mile from Transwestern Oil Co. and others No. 1 Cameron, recently completed as the first oil producer. The hole was quit at a total depth of 4,302 ft. Hard sand with a slight oil show was logged at 4,232-39 ft., but a drill-stem test showed salt water.

Location for a 9,000-ft. test in the Bruni field, Webb County, is reported to have been made by Tide Water Associated Oil Co. It is No. 7 Bruni and will be drilled in Section 7. This is the first deep test in the Laredo district.

In Hidalgo County, H. P. Lee and others No. 1 Yturria Town & Improvement Co., Porcion 43, Anastacio Villareal grant, is reported to have been completed for a gas well after perforating casing at 3,480-84 ft. The hole is bottomed at 4,069 ft. with 5½-in. casing cemented at 3,690 ft.



Zingery Map Co., Houston

Camada field, Jim Wells County, showing location of discovery well and outpost well recently completed

SOUTHWEST TEXAS COMPLETIONS IN PROVEN FIELDS

Aransas-San Patricio Counties

McCampbell field: Abbott & Trazier No. 1 Robert Harris, perforated casing 7,118-23 ft., 90 bbl., 7/64-in. choke. Graham Oil Co. No. 6 Moore, perforated casing 7,125-29 ft., 80 bbl., 7/64-in. choke. Pease, trustee No. 1 Castor-Duncan, perforated casing 7,118-30 ft., 120 bbl., 5/32-in. choke.

Caldwell County

Salt Flat field: Walden Oil Co. No. 8 Wilson, 2,704½ ft., 35 bbl. oil, 300 bbl. water, pumping.

Calhoun County

Heyser field: Sinclair Prairie Oil Co. No. 19 Bennett, 5,515 ft., 248 bbl., ⅛-in. choke.

Duval County

Fitzsimmons field: Navarro Oil Co. No. 3 Mew, sand 4,256-64 ft., 102 bbl., 9/64-in. choke. Government Wells field: Texas Co. No. 3-B Wendt, sand 1,550-63 ft., gas well. Hoffman field: Argo Oil Corp. No. 6 Rodden-fee, sand 2,822-32 ft., 231 bbl., ½-in. choke. Longhorn field: Hiawatha Oil & Gas Co. No. 9 Miller, perforated casing 4,042-50 ft., 50 bbl. jetting. Piedra De Lumbre field: Humble Oil & Refining Co. No. 7-E Duval County Ranch Co., 2,131 ft., 17 bbl., jetting. Magnolia Petroleum Co. No. 28 Duval County Ranch Co., 265 bbl., ⅝-in. choke. Rancho Solo field: Clark Cowden No. 1 W. R. Peters, sand 1,829-39 ft., gas well. S.R.C. field: Transwestern Oil Co. and others No. 23 Duval County Ranch Co., sand 1,024-51 ft., 107 bbl., pumping.

Jim Hogg-Brooks Counties

Kelsey field: Humble Oil & Refining Co. No. 16 McGill, 4,741 ft., 105 bbl., 7/64-in. choke.

Live Oak County

Oakville field: Henderson Coquat No. 2 Rosenbrock, perforated casing 2,776-83 ft., 15 bbl., pumping. Simmons Oil Co. No. 8-B McGriff, sand 2,140-49 ft., 35 bbl., 5/32-in. choke. White Creek field: Luling Oil & Gas Co. No. 1 Adams, 2,065 ft., abandoned.

Jim Wells County

Ben Bolt field: Bridwell Oil Co. No. 1 Beasely, perforated casing 5,232-38 ft., 99 bbl., 17 hours, ⅛-in. choke. Reese & Dunn and others No. 1 Smith, perforated casing 5,240-46 ft., 168 bbl., ⅛-in. choke. South Alfred field: Lewis Production Co. No. 2 Robert Adams, 4,682 ft.,

(Continued on Page 85)

Rocky Mountain Area

By T. R. INGRAM

Complete Producers at Loco Hills; Large Lovington Well

DENVER, Colo., July 10.—Continental Oil Co. released a location for an important wildcat to be drilled on the El Dorado structure in Boulder County, Colorado. Roaring Fork Oil Co. No. 1 Patterson, a test in Garfield County, has temporarily suspended operations. Colorado had no completions.

Wyoming also failed to score any completions. Continental Oil Co. will drill a deep test on the North Geary dome in Natrona County. Lance Creek had a near completion in Continental No. 6 Rodeo on 4, which will mark an extension of the Sundance pool on the east. Location was made on the Dewey dome in Weston County to be drilled by Bruce C. Teeters.

In Montana there were four completions and two new operations in the Cut Bank field and two completions and one new operation in the Kevin-Sunburst field. Coolidge & Coolidge will drill on the Eagle structure east of Kevin-Sunburst.

NEW MEXICO

Fourteen producing wells were completed and three abandonments reported in southeastern New Mexico the past week. Nine new tests in Eddy County and 12 in Lea County were reported. Developments in the Lovington pool, Lea County, and the Loco Hills area, Eddy County, featured field activity.

Amerada Petroleum Corp. No. 1-LA State, C NE SW Section 1-17-36. Lovington area, topped pay at 4,667 ft., total depth 4,944 ft. in lime, and was testing. It flowed 168 bbl. of oil in 9 hours through choke on tubing. It offsets a Magnolia well recently completed for natural flow of 301 bbl. of oil in 9 hours.

Completions in Lea County were:

Magnolia Petroleum Co. No. 2-R State, C NE SE Section 1-17-36, Lovington area. It topped pay at 4,650 ft., total depth 4,960 ft. and flowed 313 bbl. of oil in 13 hours naturally through choke. Seven-inch casing was set at 4,556 ft.

Same company's No. 34 State-Bridges, Section 14-17-34, Vacuum area, had natural flow of 478 bbl. of oil in 24 hours through ¼-in. choke on tubing. Top of pay was 4,550 ft., total depth 4,650 ft.

Magnolia Petroleum Co. No. 3 Corrigan, Section 33-21-37, had pay at 3,660 ft., was bottomed at 3,758 ft., was shot and flowed 425 bbl. of oil in 24 hours through choke

Danglade & Clower No. 2 Owens, Section 34-21-37, was acidized with 3,000 gal. and flowed 576 bbl. of oil in 24 hours through choke on tubing. Gas gaged 300,000 cu. ft. Top of pay was 3,675 ft., total depth 3,755 ft.

Gulf Oil Corp. No. 6-E Mattern, Section 12-22-36, topped pay at 3,680 ft., total depth 3,765 ft. and flowed 119 bbl. of oil naturally in 24 hours. It was acidized and flowed 787 bbl. of oil in 24 hours through open tubing.

Repollo Oil Co. No. 3-D State, Account 157, Section 12-22-36, found pay at 3,655 ft., was bottomed at 3,755 ft., and had initial production of 518 bbl. of oil in 18 hours, flowing naturally through ¾-in. choke on tubing.

Continental Oil Co. No. A-28-2 Lynn, Section 28-23-36, was bottomed at 3,680 ft. and flowed 46 bbl. of oil naturally in 2 hours through ¾-in. tubing choke. Gas gaged 517,000 cu. ft.

Same company's No. A-20-5 Jack, Section 20-24-37, had pay at 3,500 ft., total depth 3,574 ft., was shot and flowed 14 bbl. of oil an hour for 5 hours through tubing choke. Gas gaged 537,000 cu. ft.

Carl B. King No. 1 Harrison, Section 20-24-37, flowed 30 bbl. of oil an hour for 14 hours through ½-in. choke on tubing. It was shot. Top of pay was 3,510 ft., total depth 3,582 ft.

Humble Oil & Refining Co. No. 1-L State, Section 32-24-37, had pay at 3,430 ft., total depth 3,560 ft., plugged back to 3,551 ft., was acidized and flowed 10 bbl. of oil and 14 bbl. of water in 12 hours.

Richmond Drilling Co. No. 3-A State, Section 2-25-37, was shot and had initial production of 102 bbl. of oil in 6 hours, flowing through open tubing. It topped pay at 3,285 ft. and was bottomed at 3,370 ft.

Completions in Eddy County:

R. W. Fair No. 1 State, Section 1-18-29, Loco Hills area, was completed, flowing 210 bbl. of oil in 6 hours through open 2-in. tubing, set on bottom at 2,763 ft. It was shot at 2,727-52 ft. Pay was topped at 2,725 ft. It flowed 150 bbl. of oil naturally through casing before shooting.

Premier Petroleum Corp. No. 1-F Beeson, Section 31-17-30, northeast side of Loco Hills area, topped pay at 2,781 ft., total depth 2,794 ft., and flowed and swabbed 75 bbl. of oil daily, naturally. It was shot and flowed 285 bbl. of oil in 24 hours through tubing. Gravity of the oil was 36°.

In the Jackson area, Nash, Windfohr & Brown No. 9-A Jackson, Section 24-17-30, had pay at 3,083 ft., total depth 3,510 ft., was acidized and flowed 100 bbl. of oil in 24 hours through tubing. It flowed and swabbed 85 bbl. of oil naturally in 24 hours through casing. Gravity of the oil was 38°.

Repollo Oil Co. No. 3 West, Section 3-17-31, was dry and abandoned at 4,483 ft., total depth.

W. K. Royalty Co. No. 3-B State, Section 16-17-31, was dry and abandoned at 3,806 ft., total depth.

Carper-Quillen No. 1 Quillen, Section 12-19-31, wildcat, had a hole full of water at 2,830-35 ft., total depth, and was abandoned.

Lea County

Magnolia Pet. Co. No. 1-S State, C NE SW Sec. 34-16-34. Wildcat; drlg. 5,508 ft.
Amerada Pet. Co. No. 2 State, C NE SW Sec. 1-17-36. Pay 4,885 ft.; T.D. 4,944 ft.; F. 168 B.O. in 9 hours.
Barnsdall Oil Co. No. 1 Caylor, C NW NW Sec. 6-17-37. Drlg. 2,180 ft.
Drlg. & Exploration No. 2 State, SE SE SW Sec. 22-17-35. Rng. csg. 1,710 ft.
Drlg. & Exploration No. 1-E State, C SW SE Sec. 24-17-34. Drlg. 2,600 ft.
Drlg. & Exploration No. 1-O State, NE NW NE Sec. 34-17-34. W.O.C. 4,297 ft.
Humble Oil & Ref. Co. No. 7-K State, Sec. 32-17-35. Drk.
Phillips Pet. Co. No. 2 Mable, C NW NW Sec. 35-17-34. T.D. 4,655 ft.; 300 ft. F.I.H.
Phillips Pet. Co. No. 30 Santa Fe, C SW NW Sec. 26-17-35. R.U.R.
Shell Oil Co. No. 3-N State, C SW NE Sec. 28-17-35. Drlg. 3,980 ft.
Humble O. & R. Co. No. 6-K State, C SE SE Sec. 32-17-35. Drlg. 3,228 ft.
Paul Love No. 3 Pearsall, C NW NW Sec. 33-17-32. Drlg. 2,600 ft.
Magnolia Pet. Co. No. 35 State-Bridges, C NE SW Sec. 26-17-34. Drlg. 4,060 ft.
Magnolia Pet. Co. No. 36 State-Bridges, C NW NW Sec. 25-17-34. Drlg. 3,960 ft.
Magnolia Pet. Co. No. 37 State-Bridges, Sec. 14-17-34. Loc.
Maljamar O. & G. Co. No. 2-B Baish, C NE NE Sec. 27-17-32. T.D. 3,996 ft.; W.O.C.
Maljamar O. & G. Co. No. 2 Mitchell, SW SE SW Sec. 5-17-32. T.D. 4,498 ft.; gas sd.
Ohio Oil Co. No. 3 State-Warn, C SW NE Sec. 33-17-35. Drlg. 2,308 ft.
Ohio Oil Co. No. 1 State-Staplin, Sec. 19-17-35. Loc.
Shell Oil Co. No. 2-N State, C SE NE Sec. 28-17-35. Drlg. 4,422 ft.
Skelly Oil Co. No. 1-P State, C NW NW Sec. 33-17-35. Rng. csg. 4,120 ft.
Standard of Texas No. 4 State Lease 5, C NE NW Sec. 27-17-35. T.D. 4,610 ft.; rng. tbg.
Texas Co. No. 4-N State, C NW NW Sec. 30-17-35. Drlg. 3,040 ft.
Texas Co. No. 2-V State, C NE SW Sec. 34-17-34. C.&P.
P. B. English No. 1 Miller, C NE SE Sec. 18-19-32 (wildcat). T.D. 3,800 ft.; rng. electrical survey.
Continental Oil Co. No. 7 Britt B-15, C W½ SE SW Sec. 15-20-37. R.U.R.
Phillips Pet. Co. No. 4 Hobbs, C SE SW Sec. 18-20-37. T.D. 3,865 ft.; F. 12 B.O.P.H.; F. 24 B.O.P.H.
Texas Co. No. 19 State, Sec. 19-20-37. Loc.
Aloco Oil Co. No. 3-B Carson, C NW NE Sec. 33-21-37. W.O.C. 3,631 ft.
Danglade & Clower No. 3 Owen, Sec. 34-21-37. Spd.
Magnolia Pet. Co. No. 3 Marshall, C NW NW Sec. 34-21-37. Drlg. 3,590 ft.
Magnolia Pet. Co., No. 6 Carson, Sec. 33-21-37. Spd.
Skelly Oil Co. No. 2-K State, C NW NW Sec. 32-21-37. Drlg. 3,210 ft.
Stanolind O. & G. Co. No. 5-C Hill, C NW NE Sec. 5-21-37. S.O.&G. 3,695 ft.; drlg. 3,780 ft.
Wilson Oil Co. No. 1 Shell-State, C NE SW Sec. 7-21-35. Spd.
Cities Service No. 1-N State, NE SE SW Sec. 2-22-36. W.O.C. 322 ft.
J. C. Clower No. 2-B Christmas, SE NE SW Sec. 28-22-37. Drlg. 2,060 ft.
Devonian Oil Co. No. 2 Christmas, SW SW SE Sec. 28-22-37. Loc.
Gulf Oil Corp. No. 7-E Mattern, SW SW NE Sec. 12-22-36. Drk.
Osage Drlg. No. 1 Christmas, NE SE SE Sec. 17-22-37. B. roads.
Peters & Elder No. 3 Brunson, SW SW SW Sec. 3-22-37. Rig.
Lem Peters No. 3 T. O. May, SW SW NE Sec. 34-22-37. Spd.
Texas Pacific C. & O. Co. No. 17-A State, SE SE NE Sec. 11-22-36. T.D. 3,808 ft.; running tubing.
Texas Pacific C. & O. No. 18-A State, Sec. 11-22-36. Loc.
Anderson & Prichard No. 2 Bilnebry, C SE SW Sec. 29-23-37. Rng. csg 1,230 ft.
Culberson & Irwin No. 1 Carter, S NE NE Sec. 25-23-36. Rig.
Great Western Prod. No. 4-B Leonard, C SE NW Sec. 32-23-37. Loc.
Shell Oil Co. No. 2 Whitten, Sec. 20-24-37. C.&P.
Skelly Oil Co. No. 4 Simms, SW NE SE Sec. 3-23-37. T.D. 3,660 ft.; will not F.; S.D.O.
Skelly Oil Co. No. 2-A King, C NW SW Sec. 33-22-37. Drlg. 1,260 ft.
Addison Oil No. 4 Knight, C SE NW Sec. 27-24-37. W.O.C. 3,205 ft.
Anderson & Prichard No. 1 State B-32, SW NW SE Sec. 32-24-37. Drk.
Continental Oil Co. No. 2 Jack A-29, NE NE SE Sec. 29-24-37. Drlg. 1,710 ft.
Continental Oil Co. No. 4 Jack B-27, C W½ SE NE Sec. 27-24-37. Rig.
Culberson & Irwin No. 1 Martin, SE SE NE Sec. 31-24-37. Spdg.
Gulf Oil Corp. No. 2 Carr, C SW NW Sec. 10-24-37. W.O.C. 270 ft.
C. B. Kind No. 2 Harrison, Sec. 20-24-37. C.&P.
Phillips and Pure No. 8 Woolworth, C NW NE Sec. 33-24-37. W.O.C. 3,360 ft.
Repollo Oil Co. No. 4-B Whitten, NE NE SE Sec. 4-24-36. T.D. 3,765 ft.; P.B. 3,660 ft.; S.D.O.
Schermerhorn Oil Co. No. 7 Woolworth, C SE SE Sec. 28-24-37. Drlg. 3,170 ft.
Skelly Oil Co. No. 2-M State, C NW SW Sec. 32-24-37. W.O.C. 136 ft.
Weier Drlg. Co. No. 4 Woolworth, SE NW SW Sec. 28-24-37. Drlg. 3,150 ft.
Anderson & Prichard Oil Corp. No. 9 Wells, C SW NE Sec. 6-25-37. Drlg. 1,680 ft.
Anderson & Prichard Oil Corp. No. 10 Wells, Sec. 4-25-37. Loc.
Hershback Drlg. Co. No. 1 Woolworth, NE NE SW Sec. 8-25-37. C.&P.
Hershback Drlg. Co. No. 2 Burleson, C E½ SE NW Sec. 8-25-37. Drlg. 1,100 ft.
Parker Drlg. No. 1-B State, C W½ NE NW Sec. 2-25-37. Drlg. 3,075 ft.
Richmond Drlg. Co. No. 4-A State, Sec. 2-25-37. Loc.
Weiner et al No. 4 Smith, NW SE SE Sec. 4-25-37. S.D. repairs 3,455 ft.

Eddy County

G. R. Burke No. 1 State, NE NE NW Sec. 36-16-24. Drlg. 860 ft.
Carper Drlg. Co. No. 4 Robinson, SW SW SE Sec. 25-16-31. R.U. mch.
Allen, Fair & Pope No. 4-A State, SE SW NW Sec. 36-17-29. Drlg. 600 ft.
Aston & Fair, Inc., No. 1 Hudson, C NE NE Sec. 18-17-31. T.D. 3,533 ft.; P.B. 3,518 ft.; S. 50 B.O.P.D.
Barney Cockburn No. 3-B Baish, Sec. 28-17-32. Loc.
Danciger O. & R. No. 5-A Turner, C N½ NW NW Sec. 19-17-31. M.I.M.
R. W. Fair No. 1-B State, Sec. 36-17-29. Drlg. 320 ft.
R. W. Fair No. 2 State, SE NW SW Sec. 36-17-29. C.&P.
Friendship Oil Co. No. 1 State, SE SE SW Sec. 36-17-29. Sd. 2,714 ft.; T.D. 2,754 ft.; shot; F. 100 B.O. in 3 hrs.
Grayberg Oil Co. No. 12 Burch, NW NW SE Sec. 19-17-30. T.D. 3,220 ft.; F. 85 B.O.P.D.
J. E. Hughes No. 3 Brooks, NE NW NW Sec. 19-17-28. Drlg. 750 ft.
C. L. Jones No. 1 Harbold, NE NE NE Sec. 26-17-27. S.D. 488 ft.
F. G. Keyes No. 3 State, NE SW NE Sec. 9-17-28. S.O. 632 ft.; drlg. 800 ft.
Nash et al No. 10-A Jackson, Sec. 24-17-30. C.&P.
R. L. Newberry No. 2 Saunders, NE SE SE Sec. 13-17-27. T.D. 490 ft.; rng. csg.
Plains Prod. No. 1 Daugherty (wildcat), SE SE SE Sec. 11-17-27. T.D. 428 ft.; W.O.C.
Premier Pet. Co. No. 2-F Beeson, SW SW SW Sec. 31-17-30. Mch.
Red Lake Oil Co. No. 1 Reid, SE SW NE Sec. 20-17-28. Drlg. 100 ft.
Repollo Oil Co. No. 6-A Parke, NW SW NW Sec. 22-17-30. Drlg. 1,204 ft.
Republic Prod. No. 3-B Robison, SE SE SE Sec. 35-17-29. Drlg. 70 ft.
Underwood & Saunders No. 2 Miller, Sec. 4-18-29. C.&P.
Rip C. Underwood No. 2 Langford, Sec. 9-18-29. C.&P.
H. T. Clark et al No. 1 Massie, C SW SW Sec. 27-18-29. S.D. 894 ft.
Barney Cockburn No. 1 State, C NE NE Sec. 16-18-31. R.U.R.
Continental et al No. 1 Brainard, NE NE NW Sec. 11-18-19. Sd. 2,642-49 ft.; 1,100 ft. O.I.H.

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Continental et al No. 1 Travis, SE SE SE Sec. 3-18-29. Drlg. 1,410 ft.
J. H. Steinberger No. 2 Hastie, SW SW SW Sec. 18-17-28. T.D. 560 ft.; B. 6 B.O.P.D.
L. E. Elliott No. 1 Elliott, SE SE SE Sec. 24-18-29. Drlg. 2,445 ft.
Etz & Cone No. 1 Nelson, SE SE NE Sec. 10-18-30. Drlg. 3,178 ft.
Franklin Pet. Corp. No. 2-A Ballard, NW NW SE Sec. 1-18-29. Loc.
Franklin Pet. Corp. No. 1-B Ballard, NW NW NE Sec. 1-18-29. Loc.
Franklin Pet. Corp. No. 1-A Yates, Sec. 6-18-30. C.&P.
Farmer & Tallmadge No. 1 Hubbell, NE SW Sec. 4-18-25. U.R. 722 ft.
Franklin Pet. Corp. No. 1 Cappedge, NW SW NW Sec 5-18-30. T.D. 2,890 ft.; H.F.W.; S.D.O.
Green Bay-Paton No. 1 Erwin, C SW SW Sec. 9-18-31. T.D. 3,186 ft.; F. 96 B.O. in 2 hrs.
H. W. Martin No. 1 Gates, SE SE SW Sec. 15-18-30. T.D. 3,244 ft.; drlg. plug.
Me-Tex et al No. 1-B Ballard, C NW NW Sec. 8-18-29. Drlg. 1,690 ft.
Me-Tex et al No. 1 Yates, C SW SE Sec. 5-18-29. Drlg. 2,538 ft.
Plains Prod. No. 1 Swearingen, C NW NE Sec. 14-18-31. Drlg. 4,017 ft.
G. V. Price No. 2 Massie, SE SE NW Sec. 22-18-29. Drlg. 2,665 ft.
Saunders Bros. No. 1 Travis (wildcat), Sec. 19-18-29. C.&P.
Martin Yates No. 1 Saunders, NE NE NE Sec. 12-18-29. T.D. 3,200 ft.; S. 13 B.O.P.D.
Rhodes Drlg. No. 2 Swearingen, C NE NE Sec. 14-18-31 (water well). Drlg. 2,871 ft.
Texwell Corp. No. 1 Sullivan, C SE SW Sec. 23-18-31. Drlg. 3,695 ft.
Fred Turner No. 1 Nickson, C NE NE Sec. 30-18-26. U.R. 10-in. 540 ft.
Underwood & Sanders No. 1 Miller, C SE NE Sec. 5-18-29. T.D. 2,620 ft.; 1,200 ft. O.I.H.; shot.
Underwood & Sanders No. 1 Guy, SE NW NW Sec. 10-18-29. Drlg. 2,275 ft.
Underwood & Sanders No. 1 Langford, C SW SW Sec. 9-18-29. T.D. 2,565 ft.; P.B. 2,495 ft.; S. 135 B.O. in 20 hrs.
Me-Tex Supply Co. No. 1 State, NW NW NW Sec. 2-19-31. Drlg. 3,474 ft.
Trojan Oil Co. No. 1 Grant, SW SW NE Sec. 33-20s-25e. Drlg. 918 ft.
Geo. L. Roundey No. 1 Roundey, C SE SW Sec. 8-23-26. Drlg. 1,215 ft.

Chaves County

Mac T. Anderson No. 1 Warnock, C SW SE Sec. 17-15-27. Drlg. 1,815 ft.
R. M. Baker No. 1 Baker, NW NW NW Sec. 19-10-30. Rig comp.; M.I. tools.
Comanche Drlg. No. 1 Campbell, NE NE NW Sec. 15-11-26. T.D. 1,343 ft.; P.B. 1,271 ft.; acdz.; S.D.O.
Nay Hightower No. 1 Billingslea, C SW NE Sec. 28-11-30. T.D. 3,445 ft.; P.B. 3,430 ft.; B. est. 200 B.O.P.D.
New Russell & Wood No. 1 Sterrett (wildcat), NW SE NW Sec. 29-11-25. Drlg. 991 ft.
Tarkenton Bros. No. 1 Peters, SE SE NW Sec. 33-11-25. S.D. 910 ft.
Western Minerals, Inc., No. 1 Dow (wildcat), C SW NW Sec. 27-10-30. Drlg. 2,700 ft.

Luna County

O. D. Berry No. 1 Berry, SE SE SW Sec. 33-22s-10w. Drlg. 770 ft.

NORTHWEST NEW MEXICO

Bernalillo County

Norins Realty Co., Inc., No. 2 Pajarita, Sec. 22-9n-1e. Drlg. below 1,450 ft.

San Juan County

Continental Oil Co. No. 93 Rattlesnake, C SW NW Sec. 1-29n-19w. T.D. 850 ft.; prep. to test.
Angel Peak Oil Co. No. 8 Govt., C NE SW Sec. 13-28n-11w. Drlg. 580 ft.
Al Greer No. 2 Thompson, SW SE SW Sec. 10-30n-11w. S.D. 1,125 ft. for 6⅝-in. for W.S.O.
Wells & Noland No. 1 Govt., C NE NE Sec. 21-29n-11w. Drlg. below 80 ft.
Geo. Goodwin No. 1, NE NW NW Sec. 16-30n-11w. Drlg. sh. 1,350 ft.; H.F.W.

San Miguel County

Ben E. Keith No. 1 McCune, SW SE SW Sec. 32-16n-12e. S.D. 400 ft.; repairs.
Southwest Drlg. Co. No. 1 Conchas, NW NE Sec. 34-17n-21e. T.D. 2,100 ft.; fsg.

Torrance County

Drice Co. No. 1 Garland, NE SE Sec. 32-7n-7e. Drlg. 1,990 ft.; 5½-in. at 1,965 ft.

Valencia County

C. A. Grober et al No. 1 Fuqua, NE NE Sec. 19-5n-3e. Cmtd. 8¼-in. at 2,295 ft.; W.O.C.
Joiner Oil Corp. No. 1 San Clement, C NE SE Sec. 23-7n-7e. T.D. 5,606 ft.; set whpstk.; drlg. by D.P.

COLORADO

Boulder County

An important test is to be drilled by Continental Oil Co. on the El Dorado structure, 18 miles northwest of Denver in an air line and 7 miles southeast of Boulder, near the town of Louisville. The company, following an extensive geophysical survey, has taken a block of 10,000 acres in Townships 1n and 1s, Ranges 60w and 70w, and has agreed to drill to the Hygiene sand, which it is estimated will be encountered at around 5,500 to 5,800 ft. Agreement carries an option to continue the test to the Dakota if the Hygiene is found to be in place and suggests structure and favorable geological indications. It will be drilled with rotary tools and contract has been let to Manning & Martin, Inc. Operations are to start by July 25. Location has not been officially released, but probably will be in Section 5-1s-69w.

This operation is 8 to 9 miles southeast of the old Boulder field, which was discovered in 1902 and is still producing some oil from wells in the Hygiene. Location is 5 miles east and a mile south of two wells drilled in 1924 and 1926 by Repollo Oil Co. (Sinclair) in its No. 1 Denies, NE Section 33-1n-70, which is still producing from the Hygiene at 3,400 ft., and No. 1 Nichols, SW Section 32-1n-70w, which had some oil in the Hygiene and was abandoned at 6,145 ft., supposedly in the Dakota. The most interesting test in that area and on the El Dorado fold, was Ohio Oil Co. No. 1 Prince, SW Section 22-1n-69w, which was abandoned at 5,240 ft. on account of bad hole. At that depth it had considerable oil in the Hygiene, but no reliable test could be made. It was drilled in 1924 and the company offered to put down another test, but terms could not be reached with the landowners. This well is 6 miles northeast of the Continental location.

J. A. Warren No. 3 Maxwell, NW NE NW Sec. 24-1n-17w. Drlg. 330 ft.
Reynolds & Rohr No. 1 Thomas, SW SW Sec. 17-1n-70w. S.D.O. 2,138 ft.; will D.D. under management of Reynolds.

Fremont County

T. E. Maloney No. 1, SE NW Sec. 34-19s-69w. T.D. 810 ft.; str. cr. hole.
Waterville Oil Co. No. 2 Persons, CWL NE NE Sec. 17 19s-69w. T.D. 125 ft.; fsg.

Garfield County

Roaring Fork Oil Co. No. 1 Patterson, C NE Section 36-7s-88w, on the Roaring Fork structure, has suspended operations temporarily at 2,574 ft. After moving in rotary, 567 ft. of new hole was drilled and the lower 200 ft., according to R. B. Downing, geologist, was partially metamorphosed rock, who said this condition was increasing with depth and drilling was very difficult.

Roaring Fork Oil Co. No. 1 Patterson, C NE Sec. 36-7s-88w. S.D.O. 2,574 ft.

Huerfano County

J. W. Tomkins & Sons No. 2 Ojo, SE SE SE Sec. 3-29s-69w. T.D. 805 ft.; rng. 8¼-in.
S. W. Pressey No. 3 Ojo, NW NW Sec. 11-29s-69w. Drlg. 180 ft.; (C.D.).
S. W. Pressey No. 2 Alamo, C SW SE Sec. 3-27s-68w. S.D. 1,910 ft.
Miller & Hall No. 1 Hamilton, SE NW Sec. 20-29s-67w. T.D. 670 ft.; rng. cave string.
Baker-Dunigan No. 1 Firm Bros., SE NE Sec. 3-29s-69w. Spd. to 150 ft. and S.D. for heavier rig.

Jackson County

W. N. W. Corp. has taken over Colorado Oil Refining Co. well on the North McCallum dome and has resumed operations. It spudded in 1933 to go to the shallow sand and then continued intermittently to drill for the deeper horizons in which Continental Oil Co. carbon dioxide-oil wells are productive. Total depth is 4,100 ft. and is underreaming to lower 8¼-in. from 2,500 ft. to carry. Other strings include 750 ft. of 15½-in. and 1,500 ft. of 12½-in.

W. N. W. Corp. No. 1 North Park Coal Co., NW NW Sec. 18-9n-78w. T.D. 4,100 ft.; U.R. 8¼-in.

La Plata County

Nick Splatter No. 1-X Bryce, C SW SW Sec. 32-33n-9w. S.D. 2,352 ft.

Mesa County

Continental Oil Co. et al No. 1 Miller, SW SW NW Sec. 36-8s-91w. Drlg. 10,550 ft.

Moffat County

Stanolind Oil & Gas Co. is moving in cable tools to deepen its No. 34-SD Parkinson, on the Iles dome, one of the best producers completed in the upper Sundance in that field. It was completed in 1928 at 3,290 ft. and made 188 bbl. an hour at the start of a 5-hour test and 90 bbl. an hour at the end.

Stanolind O. & G. Co. No. 34-SD Parkinson, SW SE SW Sec. 22-4n-92w. T.D. 3,296 ft.; prep. to D.D.

Cooperative O. & G. Co. No. 1 Gossard, CWL E½ E½ Sec. 29-5n-93w. Spd. and S.D. to comp. R.U.
C. R. Privett No. 1 Sutton, NE NE SW Sec. 1-5n-96w. Drlg. 1,335 ft.
J. S. Warner No. 1 Baker, NE NE SW Sec. 35-5n-96w. Drlg. 200 ft. in Brown's Park form.

Park County

South Park Oil Co. No. 1 Lemar, NE NE SE Sec. 34-11s-75w. T.D. 6,975 ft.; fsg.; considerable oil in hole causing walls to slough.

Pueblo County

Eden O. & G. Co. No. 1 Horse Creek Ld. & Cattle, SW SE Sec. 29-19s-64w. S.D. 2,185 ft.

Rio Blanco County

Texas Co.-California Co. No. 2 Unit, NW SE SW Sec. 27-3n-94w. Drlg. 4,249 ft.
Buford Oil Co. No. 1 Govt., C SW SW Sec. 16-1n-91w. T.D. 3,645 ft.; W.O. 6¼-in.

WYOMING

Big Horn County

Ohio Oil Co. No. 1 Syverson, Sec. 34-54n-93w (SE SW NW Lot 53). Drlg. 3,165 ft.
Frank S. Scott No. 1 Robertson, SE SE SE Sec. 6-54n-93w. Drlg. 417 ft.
Mule Creek Oil Co. No. 1 Sessions, Lot 53 (NW NW) Sec. 34-56n-97w. T.D. 4,051 ft.; top sat. in Madison 4,039 ft.; cmtd. 7-in. 4,030 ft.; W.O.C.
Libby-Keoughan No. 1 Sheets, SE NE SE Sec. 9-55n-96w. Drlg. 3,910 ft.
A. L. Rankin No. 1 Karjala-Rankin, C SW NW Sec. 10-54n-94w. T.D. 790 ft.; M.I. 6⅝-in. to set on bttm. for W.S.O.; T. Embar 180 ft.; Tensleep 481 ft.; Amsden 755 ft.

Carbon County

Sinclair-Wyoming Oil Co. No. 13 Wertz, NE NW NW Sec. 7-26n-89w. Drlg. 5,621 ft.
Producers Oil Co. No. 1 Lake Valley, CNL Sec. 14-20n-88w. Drlg. gr. sh. 2,550 ft.; carrying 10-in. at 2,485 ft.

Converse County

New Era Fuel Co. No. 1 Simonson, NW NE SE Sec. 16-32n-68w. S.D. 715 ft.
Wyshawn Oil Co. No. 2 Lindley, C SW SW Sec. 35-32n-69w. Drlg. below 2,693 ft.
W. W. Austin et al No. 1 Pfister, SW NE NW Sec. 20-32n-68w. T.D. 713 ft.; cmtd. 5 7/16-in. at 710 ft.; S.G. in sdy. sh. 710-13 ft.
New Era Fuel Co. No. 2 Gasper, CNL NW SW Sec. 25-32n-69w. Cg. 750 ft.
New Era Fuel Co. No. 1 Pestal, SE NE NE Sec. 32-32n-69w. C.O. 420 ft. to run 8¼-in.; (formerly Fred Bunker).

Fremont County

Sinclair-Wyoming Oil Co. No. 11, CSL NE NE Sec. 15-32n-95w. R.U.R.
Hall & Olinger No. 5 Govt., NW NE Sec. 33-38n-93w. S.D. 254 ft.
Lincoln O. & G. Co. No. 5 Tribal, C SW SE Sec. 23-1s-1e. Drlg. 919 ft.
Pilot Oil Co. No. 8 Hoffman, C SW SW Sec. 22-3n-1w. Drlg. gr. sh. 650 ft.
Consolidated Oil Properties No. 3 Ewart, C SW SE Sec. 16-1n-1w. T.D. 1,245 ft.; U.R. 6⅝-in. at 1,000 ft.
Frank Pouppirt No. 2 Fidelity Tr., NW NW SW Sec. 27-3n-1w. T.D. 1,200 ft.; C.O. to res.

Hot Springs County

Phebus Oil Co. No. 2 Govt., NW SW SW Sec. 11-44n-98w. T.D. 1,100 ft.; swdg. out kink in 12½-in. joint.

Lincoln County

H. C. Harris et al No. 1 Govt., SE NW NW Sec. 23-21n-117w. T.D. 1,916 ft.; rng. 8⅝-in. to bttm.

Natrona County

Continental Oil Co. has exercised its option on a block of leases on the North Geary dome, following a seismograph survey covering an area of 75,000 acres out in all directions from the top of that structure. The company acquired 800 acres out of the block and will drill to at least 7,100 ft., the objective being sands in the Lower Cretaceous and possibly the Sundance. Bids are now being received and the test is to get under way by August 1. The structure is one of a series, including the Midway, Geary, and North Geary domes, on a line of folding to the west and parallel with the Salt Creek-Teapot fold. The location has not yet been released. It will be approximately 7 miles southeast of the Midway dome, where S. H. Keoughan has some producing wells; the same distance southwest of the Cole Creek structure on which General Petroleum Corp. made a discovery last year, and the same distance northeast of Casper. The acreage originally was blocked up in 1915-16 by N. M. Wheeler and L. S. Worthington, of Casper, and H. Leslie Parker, of Denver. Mr. Parker, who discovered the Big Muddy field, has consistently been in cooperation with his associates, held the block intact. It has never been drilled.

Mutual Oil Syndicate (S. H. Keoughan) is going back into its No. 3 well on the Midway dome to deepen it to the Muddy sand. It is in the SW NE NE Section 23-35n-79w, and was completed at 5,205 ft. in 1934 for 280 bbl. per day.

Connelly Drlg. Co. No. 1 State, SW SW NW Sec. 36-36n-81w. T.D. 1,268 ft.; M.I. 10-in.
General Pet. Corp. No. 1 Govt., C NW SE Sec. 21-35n-77w. T.D. 8,511 ft.; P.B. to 7,974 ft.; fsg. tbg.
Summit Oil Co. No. 2 Govt., NW NE NE Sec. 21-33n-80w. Drlg. 430 ft.; 8¼-in. at 426 ft.; S.G. in upper Frontier at 428 ft.

Niobrara County

The Lance Creek field had two interesting developments the past week. Most important were indications of an extension of the Sundance sand pool in Continental Oil Co. No. 6 Rodeo on 4, in the NE NE Section 35-36n-65w. Heavily saturated cores were recovered in the basal Sundance at 4,075-82 ft. The 6⅝-in. then was cemented at 4,062 ft. and tubing is being run to test. It is 1¼ miles northeast and ½ mile north of the nearest Sundance producers, and ½ mile from the nearest Leo sand well. Half a mile to the south is Ohio Oil Co. No. 1 Leo on 7, in the NW cor. SE Section 35, the most easterly well in the field, which approximately marked the limits of the Leo sand on the east. A few months ago it was plugged back and perforated opposite the Sundance at 4,304-15 ft. and completed for 179 bbl. per day.

The other development was in Continental No. 15 Tom Bell, which had water in the Leo sand, topped at 5,543 ft., and is drilling. It is in an area which has had few wells drilled to the Leo sand, although there is a bunch of producers ½ mile to the northeast. There is also a Leo well ½ mile to the north and an-

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other the same distance to the west. There has been some question whether there is a saddle between the eastern and western parts of the field.

Holly Dev. Co.-A. B. Cobb No. 4 Novick, SE SE SW Sec. 6-35n-65w. Drlg. 3,495 ft.
Ohio Oil Co. No. 3 Cash-1, SW NW SW Sec. 4-35n-65w. Drlg.; W.O. equip.
Minnelusa Oil Corp. No. 1 Marline, NW SW SW Sec. 4-35n-65w. T.D. 5,547 ft.; flwd. while acd.; prep. to run 7-in. to top Leo sd.
Ohio Oil Co. No. 12 Elizabeth Lamb-Acct. 2, NE SE SE Sec. 5-35n-65w. T.D. 602 ft.; cmtd. 13-in. 137 ft.; 150 sacks; W.O.C.
Continental Oil Co. No. 4 Apex O.P.C.-3, NW NE SW Sec. 34-36n-65w. Cg. 4,073 ft. in Sundance.
Continental Oil Co. No. 6 Rodeo-4, NW NW NE Sec. 35-36n-65w. T.D. 4,090 ft.; cmtd. 6⅝-in. 4,062 ft.; prep. to test.
Continental Oil Co. No. 3-B Dielman, SW SE NW Sec. 8-35n-65w. T.D. 5,698 ft.; P.B. to 5,565 ft.; prep. to install pmp.
Continental Oil Co. No. 16 Tom Bell Cattle, NW SW SW Sec. 34-36n-65w. Drlg. 3,420 ft.
Argo Oil Corp. No. 1 U. S.-40, NW NW SW Sec. 8-35n-65w. S.D. 3,845 ft. for heavier equip.
Continental Oil Co. No. 4 Apex O.P.C.-4, SE SE NW Sec. 35-36n-65w. T.D. 4,304 ft.; cmtd. 8⅝-in. 4,254 ft.
Continental Oil Co. No. 15 Tom Bell Cattle, C SW SW Sec. 34-36n-65w. Drlg. 5,829 ft.
Ohio Oil Co. No. 11 Putnam, SE SE SW Sec. 33-36n-65w. T.D. 5,529 ft.; wtr. in Joss sd.; P.B. to 5,392 ft.; swbd. 72 B.F. in 8 hrs.
F. F. Hintze et al No. 1 Wright-Govt., C NW SE Sec. 30-36n-63w. T.D. 4,964 ft.; cmtd. 7-in. at 4,617 ft. and S.D.
Fall River Roy & Prod. Co. No. 1 Govt., CSL SE SE Sec. 35-40n-61w. Drlg. 1,750 ft.; 10-in. cmtd. 1,730 ft. for W.S.O.
Continental Oil Co. No. 10 Otto Rohlff, SW SW SE Sec. 31-36n-65w. Cmtd. 13-in. at 294 ft.; W.O.C.

Park County

Dry Creek Oil Co. No. 1 State, C NE NW Sec. 16-50n-100w. T.D. 1,280 ft.; T. Frontier 1,270 ft.; cmtd. 8¼-in.; W.O.C.

Sublette County

J. C. Anderson Drlg. Co. No. 1, W½ NE Sec. 30-30n-111w. Bldg. rig; C.T. test to 2,000 ft.
California Co. No. 1 Unit 1, C SW NE Sec. 14-31n-109w. T.D. 6,683 ft.; rmg. to run 9⅝-in.
Wyo. Pet. Corp. No. 1 Budd, C NE NE Sec. 10-29n-113w. Drlg. 2,008 ft.
Texas Co.-Frontier Pet. Co. No. 1 Govt. Unit, SE SE SW Sec. 1-28n-114w. T.D. 8,194 ft.; P.B. and tstg.
Yellowstone Oil Co. No. 1 Budd, C SE SE Sec. 6-30n-112w. T.D. 450 ft.; 12½-in. at 428 ft.

Sweetwater County

Mountain Fuel Supply Co. No. 1 Clark, NW SE SW Sec. 12-19n-104w. T.D. 2,573 ft.; M.I. rotary.
Mountain Fuel Supply Co. No. 1 Stone, C SW SW Sec. 18-19n-103w. S.D.O. 4,546 ft.; perf. at 4,000-3,660 ft.; wtr.; prob. abd.

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Sinclair-Wyoming Oil Co. No. 84-A, SW NW NW Sec. 11-26n-90w. Drlg. 1,431 ft.

Uinta County

Spring Valley Pet. Co. No. 13, CSL SE SE Sec. 22-15n-117w. R.U. to D.D. from 1,726 ft.; O.W.D.D.

Weston County

The Dewey dome is to have another test in Bruce C. Teeter No. 1 State, SE NE Section 36-42n-61w, 2 miles north and west of the discovery well drilled several years ago in the SE NW Section 7-41n-60w, drilled by Conway Oil Corp. Location was made by E. W. Krampert, geologist, of Casper, whose map shows that this spot is approximately 225 ft. higher than the discovery, which made 20 bbl. per day. It will test the sands in the Minnelusa.

Bruce C. Teeters No. 1 State, SE SE NE Sec. 36-42n-61w. Loc.; (first report).
Dornacher & Neiman No. 1 Neiman, NW NW NW Sec. 6-47n-64w. Drlg. 300 ft.
Lem Johnston No. 1, NW SW Sec. 24-44n-63w. Drlg. 3,305 ft.
John Brorphy No. 1 George, SW SE NW Sec. 12-48n-64w. Drlg. below 2,430 ft.
F. P. Diiger et al No. 4 Ost, CNL NE NE Sec. 25-46n-64w. Cg. in Sundance below 2,300 ft.
Hunter & Satterlee No. 1 Draper, NW NW NW Sec. 10-46n-63w. S.D. 160 ft. (C.D.) for repairs.
Kroker et al No. 2, CNL NE NW Sec. 31-47n-63w. T.D. 375 ft.; W.O. new mch. to D.D.
Updike Co. No. 7, NW NW SW Sec. 25-46n-64w. Cmtd. 8¼-in. at 700 ft.; W.O.C.
Federal Oil Co. No. 9, CNL SE SE Sec. 15-46n-64w. Drlg. in sat. sd. topped at 2,130 ft.

MONTANA

Blaine County

Walter Drought et al No. 1 Stam, CSL SW SE Sec. 10-31n-18e. T.D. 1,065 ft.; S.G.; rng. csg. to top Eagle sd.

Carbon County

R. R. Tarrant No. 2 McKay, C SE NW Sec. 4-6s-18e. Drlg. 2,115 ft.
Alex Beaton No. 1, CSL SE SE Sec. 23-6n-23e. Drlg. 1,600 ft. in 8½-in. hole.
Miracle Oil Co. No. 2 Govt., CWL NE SE Sec. 3-6s-23e. T.D. 2,381 ft.; fsg.; tools at 1,600 ft.

Fallon County

Montana-Dakota Utilities Co. No. 137 Govt. Unit 7, NE SW SW Sec. 10-6n-60e. Drlg. 670 ft. in Bearpaw; 10¾-in. at 104 ft.

Glacier County

Cut Bank had four completions and two new operations. Glacier Production Co. No. 1 Larson, CEL NE NW Section 35-36n-6w, which attracted attention 2 weeks ago when it swabbed 150 bbl. in 12 hours from the Sunburst sand, was drilled through the Cut Bank without materially changing conditions. The Sunburst rarely produces in the field, the pay being mostly in the Cut Bank sand. No. 1 Larson was completed at 3,118 ft., total depth. It had the top of the Sunburst at 3,020 ft. and at 3,022-28 ft. swabbed 150 bbl. in 12 hours and was making 10 bbl. an hour at the end of the period. The top of the Cut Bank was at 3,035 ft. and showed slight saturation at 3,096-98 ft. After setting 111 ft. of 5⅛-in. perforated liner at 3,120 ft., the well swabbed 165 bbl. the first 24 hours.

A. R. Pardue No. 2 Tribal-171, NW SW SW Section 7-32n-5w, was completed at 2,885 ft. after plugging back from 2,900 ft. and swabbed 150 bbl. the first 24 hours from the Cut Bank at 2,840-85 ft. Main pay was at 2,865-85 ft.

Santa Rita Oil & Gas Co. No. 2 Jordan, NW SE Section 7-32n-5w, swabbed 103 bbl. the first 6 hours and was making 7 bbl. an hour at the end of the period. Total depth is 2,912 ft. and the Cut Bank was at 2,840-2,912 ft., with the main pay at 2,887-2,912 ft.

Olive Oil Co. No. 5 Winkler, NE cor. Section 35-35n-6w, was completed at 2,790 ft. with an estimated flow of 4,000,000 to 5,000,000 cu. ft of gas per day from the Sunburst and Cut Bank sands. Sand record is not yet available.

Santa Rita O. & G. Co. No. 1 Miller, CWL SW NE Sec. 29-33n-5w. R.U.; (first report).
A. R. Pardue No. 3 Tribal-171, NW SE SW Sec. 7-32n-5w. Loc.; (first report).
Glacier Prod. Co. No. 2 Hall, C NE SW Sec. 35-36n-6w. M.I. rig; (first report).
Cobb-Reagen No. 4 Jackson, SW SW NE Sec. 5-32n-5w. R.U.
Glacier Prod. Co. No. 1 Hendrickson, C NW NE Sec. 28-33n-5w. Drlg. 1,600 ft.
Kistner-Watson No. 2 Britton, SW SE SE Sec. 14-34n-5w. Spdg.
Huber-Montana Co. No. 1 Krueger, CWL SW SE Sec. 11-37n-5w. Drlg. 2,200 ft.
Texas Co. No. 4 Curran, C NE NE Sec. 8-32n-5w. Drlg. 1,897 ft.
Texas Co. No. 4 State, C NW NW Sec. 16-32n-5w. Drlg. 1,240 ft.; Colo. 610 ft.; 10¾-in. 634 ft.
Santa Rita O. & G. Co. No. 2 Stahl, C NW SW Sec. 21-35n-5w. Drlg. 2,190 ft.
Par Oil Co. No. 2 Tribal-170, SW NE SW Sec. 7-32n-5w. R.U.
Glacier Prod. Co. No. 1 Jaeger, C NW NW Sec. 15-32n-5w. Drlg. 1,695 ft.
R. C. Tarrant No. 8 Getty, CWL NW SE Sec. 15-34n-6w. Drlg. 2,600 ft.

(Continued on Page 100)

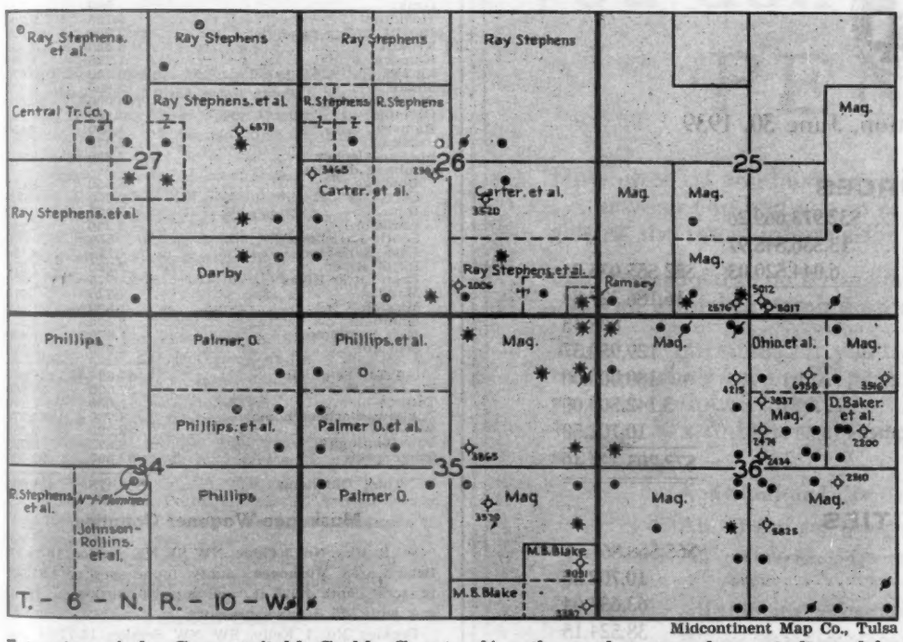
Oklahoma Operations

By DAL DALRYMPLE

Large Dolomite Well Extends St. Louis Field to Southeast

An important extension of the St. Louis field in Pottawatomie County gave Oklahoma oil men something to talk about the past week. The outpost was the T. E. Iglehart and others No. 1 Keener, NE NE SE Section 4-6-5, ¾ mile southeast of nearest production. After treatment with 5,000 gal. of acid, it flowed 1,650 bbl. of oil in 24 hours from dolomite at 4,044-71 ft., total depth. It was pinched in to 20 to 30 bbl. an hour while making pipe line connections. Location is on a Pure Oil Co. farmout. The well is one location west of the Pottawatomie-Seminole county line. Nearest production is the Iglehart and others No. 1 Phillips, NE NW NW Section 4-6-5, a small producer. East and slightly north of the extension producer, a dry hole was drilled in SE SW NW Section 3-6-5, bottomed at 4,270 ft.

Extension of the Cement field, Caddo County, to the southwest appeared imminent at B. E. Johnson and others No. 1 Plummer, NE NE SW Section 34-6-10w. Casing was run to 3,343 ft. on top of sand where oil was showing, and operators were waiting on cement.



Midcontinent Map Co., Tulsa

Extension of the Cement field, Caddo County, ½ mile southwestward was indicated by oil showings in Johnson and others No. 1 Plummer, Section 34-6-10w

Pure Oil Co. No. 1 Noble, C NE SE Section 35-3s-1e, pool opener northwest of Ardmore in Carter County, continued swabbing and testing after producing 140 bbl. of oil in 20 hours through perforations in Sycamore lime at 4,150-4,234½ ft.

Efforts to find production in Wilcox sand at Carter Oil Co. No. 1 Staggers, C W½ SE NW Section 4-25-3w, wildcat in Grant County, were unsuccessful. Total depth was 5,528 ft., in Tyner sand. Casing was perforated at 5,302-13 ft. in Wilcox sand and salt water rose to within 700 ft. of top. More salt water was found when casing was perforated at 5,269-74 ft. Water was to be plugged off and additional tests made further up the hole.

Shell Oil Co. No. 1 Ratliff, SE SE NE Section 19-7-17w, offsetting the discovery well in the new Hobart field, Kiowa County, was bottomed at 1,053 ft., and the crew was underreaming 7-in. casing before drilling deeper. It was believed the oil pay would be found in Viola lime within the next 10 to 15 ft. The discovery well, one location eastward, was bottomed in lime at 1,055 ft.

Phillips Petroleum Co. No. 1 Shemwell, C SE NW Section 8-5-10, northeast of the discovery well in the Calvin pool, Hughes County, may be plugged back to Cromwell sand for testing after water intruded at 4,595 ft. in Viola lime. After acidizing, it swabbed 250 bbl. of fluid in 8 hours, with about 2 per cent oil and the balance water.

Among the Wildcats

Another attempt to find oil in Harmon County, extreme southwestern corner of Oklahoma, resulted in failure with the abandonment the past week of Russo Drilling Co. No. 1 Abernathy, C SW SW Section 12-2n-26w. It was bottomed at 2,802 ft., had a slight showing of oil after a shot when plugged back to 2,750 ft., but water intruded and it was abandoned.

Gandy No. 1 fee, NW NW Section 2-1n-11w, wildcat in the Lawton area, Comanche County, was dry and abandoned at 431 ft., total depth.

Continental Oil Co. No. 1 Hudson, SE SE SE Section 8-4n-9e, wildcat in southwestern Hughes County, topped Wilcox sand at 6,312 ft., cores were salty and it was dry and abandoned at 6,330 ft., total depth.

Mason & Nicholls No. 1 Lindsay, SW SE SE Section 26-12-3e, wildcat in the Meeker area, Lincoln County, failed to find production in Wilcox sand topped at 5,453 ft., or in second Wilcox sand found at 5,541-60 ft., total depth, and was dry and abandoned.

Bryant No. 1 Neil, SW SW Section 8-1s-2w, Carter County, and Helf No. 1 Thompson, SE SE Section 5-1s-21w, Jackson County, were abandoned locations.

Kirk-Green-Way No. 1 Boland, SE NE NW Section 28-11-3e, wildcat east of Dale and northwest of Shawnee in Pottawatomie County, had built rig and was moving in rotary tools.

Foley & Dye No. 1 Belter, C SE Section 32-28-10w, was location for a wildcat northeast of Cherokee in Alfalfa County. It is about 9 miles south of the Kansas State line.

Seminole County

Cities Service Oil Co. No. 5 Fish B, NW SW SE Section 19-7-8, Fish pool, Seminole County, found Wilcox sand at 4,124-71 ft., total depth, and flowed 451 bbl. of oil in 24 hours, cutting 2 per cent.

Evans No. 3 Swan, NE NW SE Section 33-7-6, Dora area, had sand at 2,843-84 ft., total depth 2,907 ft., plugged back to 2,887 ft., was shot and flowed 45 bbl. of 36-gravity oil in 24 hours.

Magnolia Petroleum Co. No. 1 Jimka, NW SW Section 22-7-5, had Calvin sand at 2,779 ft., was shot at 2,785-94 ft., total depth, and flowed 43 bbl. of oil in 24 hours.

Wood Oil Co. No. 3 Tiger, SE NW SE Section 2-8-6, pumped 226 bbl. of oil in 24 hours after a shot from Wilcox sand at 4,145-71 ft., total depth.

Moss No. 2 Leachman, C W½ E½ E½ Section 34-10-6, topped Calvin sand at 2,490 ft., was bottomed at 3,756 ft., perforated casing at 2,486-2,518 ft., but was dry and abandoned.

Phillips Petroleum Co. No. 2 Bethel Unit, SE NW NE Section 7-9-8, an old well in the Bethel pool, was plugged back from 3,307 ft. to 2,785 ft., shot and pumped 28 bbl. of oil and 9 bbl. of water in 24 hours.

Superior Oil Co. No. 1 Tiger, NW SE SE Section 12-6-5, an old well, was deepened from 3,794 ft. to Wilcox sand at 3,804-07 ft., total depth, and pumped 67 bbl. of oil and 10 bbl. of water daily.

Sunray Oil Co. No. 2 Fleet, SE SW SW Section 12-6-5, Grayson area, was bottomed at 3,000 ft., plugged back to 2,815 ft., set 7-in. casing at 2,795 ft., and produced 1,500,000 cu. ft. of gas daily.

Same company's No. 4 Swan, SE SE Section 12-6-5, had dolomite at 3,733 ft., set 7-in. casing at 3,737 ft., total depth 3,790 ft., was acidized and pumped 125 bbl. of oil in 24 hours.

Delaney & Olson No. 1 Vance, SE NE SE Section 13-6-5, was a location; Sunray Oil Co. No. 3 Millsap, SW SW Section 7-6-6, moving in rotary tools; Wood No. 1 Holland, NE NW Section 30-7-8, cellar and pits.

Pottawatomie County

Conley No. 1 Sanders, NW SE NW Section 20-7-4, St. Louis field, Pottawatomie County, topped Viola lime at 4,274 ft., was bottomed at 4,344 ft., plugged back to 4,338 ft., acidized and pumped 60 bbl. of oil in 24 hours.

Trigg No. 1-B Rhodd, C N½ SE SE Section 32-7-5, had dry Earlsboro sand at 3,115-22 ft., total depth 3,160 ft., plugged back to 2,828 ft., perforated casing at 2,766-91 ft., and flowed 16 bbl. of 43-gravity oil in 24 hours.

Pioneer Drilling Co. No. 1 Green, SE NE Section 35-7-4, an old well, was deepened from 4,231 ft. to 4,286 ft., acidized and pumped 76 bbl. of oil and 360 bbl. of water in 24 hours. Top of dolomite was 4,190 ft.

Big Chief Drilling Co. No. 1 Green, NW SW SE Section 29-7-5, an old well deepened from 4,138 ft. to 4,203 ft., pumped 308 bbl. of oil and 50 bbl. of water in 24 hours.

Eagle Co. No. 2 Green, SW NW SE Section 29-7-5, was acidized and pumped 100 bbl. of oil and 20 bbl. of water in 24 hours after deepening from 4,076 ft. to 4,132 ft.

New operations in Pottawatomie County: Magnolia Petroleum Co. No. 4 Billington B, SE SW NE Section 21-7-5, location; same company's No. 3 Fyke D, SE

NE NW Section 29-7-5, building rig; W. A. Delaney No. 4 Bruno, NW NE SE Section 31-7-5, location; J. F. Smith No. 2 McDaniels, SE SW NE Section 31-7-5, location; J. C. Shaffer No. 1 Marrs, C N½ SW NW Section 35-8-4, rig.

Okfuskee County

A producer was completed in the Okfuskee pool, Okfuskee County, at Hyer No. 2 Board, SW SE NW Section 10-13-10. It had Dutcher sand at 2,662-67 ft., total depth, and flowed 84 bbl. of 35.4-gravity oil in 24 hours.

Shaw No. 1 Douglass, NE NE Section 16-10-11, was a location.

Pontotoc County

Hatcher No. 1 Sutton, NE SE NE Section 24-5-4, Bebee area, Pontotoc County, topped Viola lime at 2,317 ft., total depth 2,400 ft., set 7-in. casing at 2,372 ft., and pumped 20 bbl. of oil and 65 bbl. of water in 24 hours.

New work in Pontotoc County: E. H. Moore, Inc., No. 3 Brown, NW SE SW Section 24-2n-7, Fitts field, location; same operator's No. 4 Brown, NE SE SW Section 24-2n-7, location; Arrowood Oil Co. No. 1 McCoole, SW NE NE Section 6-4-7, rigging up machine; Ross Drilling Co. No. 1 Shi, NE SE SE Section 24-5-4, building rig; Lake Oil Co. No. 2 Summers, SE SE Section 26-5-4, rig; Dave Malarnee No. 2 Haynes, SE NE SW Section 32-5-5, drilling below 1,630 ft.

Lincoln County

Smith No. 1 Gertson, C S½ NE SW Section 31-16-6, north of the Skellyville area, Lincoln County, was dry and abandoned in Viola lime at 4,183-88 ft., total depth.

Quinlan No. 1 Duncan, SW SE Section 21-17-5, found Wilcox sand at 4,101-05 ft., total depth, and was dry and abandoned.

Yorkan Production Co. No. 1 Vlasek, C N½ NE NW Section 2-12-5, was a location.

Oklahoma County

Two new oil wells and a failure were completed and an old well was deepened and recompleted in the Oklahoma City field, Oklahoma County, by Indian Territory Illuminating Oil Co.

Company's No. 4 Canfield, NW SE SW Section 19-11-2w, found Pawhuska zone at 2,740 ft. and 3,074 ft., total depth 3,085 ft., and pumped 711 bbl. of oil and 54 bbl. of water the first 24 hours.

The No. 4 Canfield-Button, SW NE SW Section 19-11-2w, topped Pawhuska zone at 3,410 ft. and was dry and abandoned at 3,700 ft., total depth.

The No. 5 Brokaw, SE NE Section 13-11-3w, had Hoover sand at 4,079-94 ft., total depth, plugged back to 3,975 ft., perforated casing at 3,925-50 ft., and pumped 6 bbl. of oil in 24 hours.

The No. 2-B M-K-T, NE SE SE Section 34-12-3w, an old well, was deepened from 6,369 ft. to 6,404 ft. and pumped 188 bbl. of oil in 24 hours. Top of Wilcox sand at 6,245 ft.

Estimated Daily Production

Estimated daily production for Oklahoma for the week ending July 8, and for the preceding week, was as follows:

	Barrels	
	July 8	July 1
Allen	7,175	7,250
Billings	6,600	6,850
Burbank	8,175	8,275
South Burbank	9,325	9,350
Balance Osage	18,175	18,250
Blackwell district	4,025	4,050
Bristow-Slick	7,875	7,925
Chandler	1,525	1,550
Crescent	3,175	3,250
Cromwell	3,175	3,225
Cushing-Shamrock	10,250	10,325
Duncan	4,375	4,350
Edmond	5,650	5,725
Fish	5,350	5,275
Fitts	26,350	25,200
Jesse	2,525	2,475
Graham-Fox	3,900	3,950
Gray	900	925
Healdton	9,125	9,200
Hewitt	3,950	4,025
Keokuk	3,625	3,650
Konawa	1,225	1,250
Lucien	9,550	9,775
Moore	2,825	2,875
Oklahoma City	103,900	90,800
Olympic	3,150	3,175
Ramsey	4,500	4,650
Sasakwa	1,375	1,375
Sholem-Alechem	2,850	2,925
Seminole district:		
Bowlegs	8,550	8,625
Carr City	2,950	3,000
Dora	3,525	3,575
Earlsboro	5,250	5,225
South Earlsboro	550	575
East Earlsboro	4,175	4,150
Little River	7,225	7,275
East Little River	775	800
Maud	725	775
Mission	1,550	1,600
Seminole	8,425	8,375
East Seminole	1,375	1,400
Searight	2,550	2,575
Total Seminole	47,625	47,950
St. Louis-Pearson	37,500	37,250
Tatums	2,050	2,100
Tonkawa-Garber-Thomas	4,250	4,275
Wewoka	2,225	2,250
Yale-Jennings	3,675	3,725
Other pools	92,500	92,500
Total Oklahoma	464,425	451,950

Muskogee-Wagoner Counties

W. B. Pine No. 5 Cable, NW SE NE Section 16-14-17, Beland area, Muskogee County, found sand at 1,352-70 ft., total depth 1,375 ft., and gaged 5,500,000 cu. ft. of gas, with 575 lb. rock pressure.

Beckley No. 1 Kelly, SW NW Section 15-17-16, Coweta area, Wagoner County, topped Dutcher sand at 752 ft., had Pitkin lime at 838-842 ft., total depth, plugged back to 787 ft., was shot and pumped 7 bbl. of oil daily.

Bailey No. 1-A Hawkins, NE NW Section 20-18-16, was dry and abandoned at 807 ft., total depth.

Griffith No. 1 Brown, C SE SW Section 27-18-17, third Wagoner County completion of the week, was dry and abandoned at 925 ft., total depth.

Creek County

A 225-bbl. oil well was completed in Creek County at Dunn No. 1 Anthis, NW SE SE Section 34-14-10. It was an old well deepened from 3,189 ft. to 3,196 ft., total depth. Misener sand was topped at 3,184 ft.

Vierson No. 1 Kimble, NE SE NE Section 10-14-10, an old well deepened from 2,643 ft. to 2,695 ft., pumped 12 bbl. of oil in 24 hours.

Atlantic Refining Co. No. 2 Kimble-Reading, CNL SE NW Section 16-14-10, an old well, was deepened from 3,325 ft. to 3,360 ft., plugged back to 3,356 ft. and pumped 64 bbl. of oil and 5 bbl. of water daily. Top of Wilcox sand was found at 3,301 ft.

Strozier Drilling Co. No. 2 Anthony, SW NE Sec-

NATIONAL BANK OF TULSA

TULSA, OKLAHOMA

Statement of Condition, June 30, 1939

RESOURCES

Cash and Due from Banks	$32,973,669.26	
U. S. Government Securities	13,536,845.97	
Other Bonds and Warrants	6,044,520.03	$52,555,035.26
Loans and Discounts		16,186,327.84
Overdrafts		808.43
Income Receivable Accrued		129,950.37
Stock in Federal Reserve Bank		180,000.00
Bank Premises		3,142,500.00*
Customers' Liability under Acceptances		10,702.50
TOTAL		$72,205,324.40

LIABILITIES

Deposits		$65,568,867.71
Acceptances Executed		10,702.50
Income Collected not Earned		63,637.04
Reserve for Interest, Taxes, etc		38,524.15
Reserve for Preferred Dividends		15,000.00
Capital—Preferred	$1,000,000.00	
Capital—Common	2,500,000.00	
Surplus	2,500,000.00	
Undivided Profits and Reserves	508,593.00	6,508,593.00
TOTAL		$72,205,324.40

*Increase of $257,023.48 in book value of bank premises since previous report, is due to payment in full of $560,000 mortgage indebtedness.

The Oil Bank of America

Member Federal Deposit Insurance Corporation

tion 12-16-11, Mounds area, had Peru sand at 1,174-95 ft., total depth, was shot, but was dry and abandoned.

Sinclair Prairie Oil Co. No. 37 Dacon, CSL SE NE Section 16-17-7, Cushing field, found Bartlesville sand at 2,695-2,805 ft., total depth, was shot and pumped 50 bbl. of oil in 24 hours.

Shamblin No. 1-A Harjoca, NE NE Section 21-17-9, was dry and abandoned in sand at 3,309-20 ft., total depth.

Weimer No. 1 Tiger, NW NE SW Section 31-17-10, had Wilcox sand at 3,040-66 ft., total depth, and was dry and abandoned.

Grimes No. 3 Foster, CWL NE NW Section 14-19-9, Mannford area, pumped 10 bbl. of oil daily after a shot from sand at 2,206-18 ft., total depth.

Rufley No. 1-A Walker, SE NW NW Section 26-18-7, Cushing field, was completed for 9,500,000 cu. ft. of gas daily from sand at 591-594 ft., total depth.

Central Commercial Oil Co. No. 1-A Kelly, NE SE SW Section 5-18-9, was rigging up machine.

Okmulgee-Tulsa Counties

Hass No. 16 Bassett, NE SW NW Section 15-14-14, Okmulgee County, had sand at 1,170-78 ft., but was dry and abandoned at 1,196 ft., total depth.

Downing No. 1 Johnson, C SE SW Section 25-17-13, Bixby district, Tulsa County, was shot and gaged 500,000 cu. ft. of gas from sand at 1,267-77 ft., total depth.

Same operator's No. 2 Johnson, NE SE SW Section 25-17-13, also produced 500,000 cu. ft. of gas after a shot in sand at 1,259-69 ft., total depth.

Sanders No. 3 Anthis, NE NW SW Section 33-17-13, Tulsa County, found Dutcher sand at 1,715-80 ft., total depth, plugged back to 1,761 ft., was shot and pumped 3 bbl. of oil daily.

Osage County

Howard No. 5 H-ah-to-me, SW SE Section 30-22-9, Osage County, was dry and abandoned at 565 ft., total depth.

In Pawnee County, Haynes No. 1 Tate, SE NW Section 9-20-9, was drilling below 850 ft.

In Kay County, Tide Water Associated Oil Co. No. 1 Easterday, NW NE Section 21-28-1w, had dug cellar and pits.

In Payne County, Helmerich & Payne, Inc., No. 1 Collins, C E½ NW NW Section 13-17-1e, was a rig.

In Pittsburg County, J. C. Weible No. 2 Smith, NW SW SE Section 32-9-16, was a machine.

In Murray County, Kerlyn Oil Co. No. 1 Wolfe, NW SW Section 8-1n-2e, was a location.

Carter County

Raizen Brothers completed an 18-bbl. pumper in the Healdton field, Carter County, at No. 3 Smalley, NW NE Section 16-4s-3w. It was bottomed at 1,397 ft., plugged back to 1,135 ft. and shot.

Merrick No. 1-A Schermerhorn, SE NW SW Section 5-4s-3w, an old Healdton well, was deepened from 558 ft. to sand at 740-760 ft., total depth, pumped 3 bbl. of oil daily and was shut down.

Jaybee No. 1-A Potts, SE NE SE Section 8-1s-2w, had lime at 276-280 ft., total depth, and pumped 4 bbl. of 32-gravity oil daily.

Evans No. 1-A Poole, SE NE SE Section 29-1s-2w, was dry and abandoned at 590 ft., total depth.

Caddo County

Another large producer was completed in the Cement field, Caddo County, at Magnolia Petroleum Co. No. 9 Surbeck, SW SE SE Section 3-5-9w. It found Rowe sand at 3,337 ft., was bottomed at 3,363 ft., and flowed 572 bbl. of oil in 4 hours through casing.

Same company's No. 3 Hanley, NW SE Section 35-6-10w, had dug cellar and pits.

Stephens-Jefferson-Jackson Counties

Ellis No. 1 Tucker, NE SW NW Section 22-1s-5w, Velma area, Stephens County, produced 750,000 cu. ft. of gas from sand at 659-670 ft., total depth, completed. Keister No. 1 Smith, NE SE NW Section 13-2s-4w, Milroy area, had a hole full of water in sand at 626-710 ft., total depth, and was abandoned. Pace No. 1-D Parker, NE SE Section 11-2s-8w, Comanche pool, was dry and abandoned at 2,272 ft., total depth. Minnich No. 1-A McLendon, SE SW Section 4-3s-5w, was temporarily abandoned in sand at 1,021-65 ft., total depth. Same operator's No. 1 Stafford, SE NE SW Section 4-3s-5w, was estimated good for 5 bbl. of oil daily at 1,108 ft., total depth, and was shut down. Tomlinson No. 2 Montgomery, NW SE Section 11-2s-8w, an old well, was deepened from 2,049 ft. to 2,059 ft. and pumped 71 bbl. of oil.

Carl Carter No. 1 Spears, NE SW Section 15-1s-5w, Stephens County, had spudded. Pace No. 3 Bush C, NE SE NW Section 3-2s-8w, was a rig.

In Jefferson County, Bridwell Oil Co. No. 1 Seay, SE NE SW Section 29-6s-5w, an old well in the Spring-Oscar area, was dry and abandoned after deepening from 1,519 ft. to 1,906 ft.

In Jackson County, Burk Roy No. 1 Holt, SE SW NE Section 32-1n-19w, Tipton area, was dry and abandoned at 2,723 ft., total depth.

Southwest Texas Fields

(Continued from Page 78)

192 bbl., ⅛-in. choke. Henshaw Brothers and others No. 3 Thigpen, perforated casing 5,342-53 ft., 176 bbl., ⅛-in. choke. R. O. Ramsey No. 1 Richardson, 4,370 ft., abandoned. Royalty Oil & Gas Corp. No. 1 Zappe, perforated casing 4,648-53 ft., gas well.

McMullen County

Ezzell field: Harry Ezzell No. 24 Harry Ezzell, perforated casing 1,535-38 ft., 10 bbl. oil, 90 bbl. salt water, pumping.

Nueces County

Agua Dulce field: L. M. Lockhart No. 5 Purl, 6,516 ft., abandoned. Flour Bluff field: Humble Oil & Refining Co. No. 2 State, 6,647 ft., 139 bbl., ¼-in. choke. Luby field: McCurdy and others No. 2 State, perforated casing 4,322-33 ft., 115 bbl., ⅛-in. choke. Stanolind Oil & Gas Co. No. 24 Spessard, 4,357 ft., 97 bbl., ¼-in. choke. Sun Oil Co. No. 3 Butts, perforated casing 4,340-43 ft., 98 bbl., ¼-in. choke. Minnie Bock field: Texas Conservative Oil Co. No. 1 Bruno Bock, perforated casing 3,812-18 ft., 115 bbl., 9/64-in. choke. North Luby field: Seaboard Oil Co. No. 3-A LaPrelle, 4,400 ft., abandoned. Richard King field: Southern Minerals Corp. No. 2-A King, perforated casing 5,394-5,402 ft., 242 bbl. in 12 hours, ¼-in. choke. Saxet field: Western Gulf Petroleum Corp. No. 1 Priour, perforated casing 5,742-46 ft., 127 bbl., 5/64-in. choke.

Refugio County

La Rosa field: Benson & Jones No. 3-A Rooke, perforated casing 5,402-06 ft., 135 bbl., ⅛-in. choke. Coronado Corp. No. 13 Rooke, perforated casing 5,889-92 ft., 153 bbl., ⅛-in. choke. Coronado Corp. No. 22 Rooke, perforated casing 5,892-95 ft., 145 bbl., ⅛-in. choke. Tomoconnor field: Quintana Petroleum Corp. No. 1-B Williams, 5,925 ft., 563 bbl., ¼-in. choke.

San Patricio County

East White Point field: Plymouth Oil Co. No. 4 Solar-Ficke, perforated casing 5,636-42 ft., 108 bbl., 7/64-in. choke. Easterwood Production Co. No. 1 Foran & Sharpe, perforated casing 5,640-48 ft., 122 bbl., ⅛-in. choke.

Zapata County

Mirando Valley field: Carter & Rubsamen No. 4 Lopez, 1,867 ft., abandoned.

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THE OIL AND GAS JOURNAL
DESK M **TULSA, OKLAHOMA**

North and East Texas

Possible Linking of Sikes and Hull-Silk Pools Seen

By
D. H. STORMONT

WICHITA FALLS, Tex., July 10.—Possible linking of the main part of the Hull-Silk pool with the Sikes pool in northern Archer County, together with the third completion in the Burnett field, a new wildcat test for Montague County, and continued activity in Clay County's wildcat exploration campaign led the development in the North Texas district.

Largest producer for Archer County was assured as the week closed in Bert Ligon No. 1 Johnson, southwest corner of the southeast 80 acres of the H.T.&B. Survey, Abstract 199, indicating a linking of the Hull-Silk pool and the Sikes pool. The test is about a mile south of the Sikes pool. Both areas are producing from approximately the same 4,350-ft. level and geologists have expressed the belief that the two pools are on one and the same structure, being a southwest and northeast trend reflected on the productive Strawn formation from the Bend lime. The producer, which found the second Strawn pay of the Hull-Silk pool from 4,324-48 ft., flowed 166 bbl. in 3 hours on Railroad Commission gage. The well flowed during the 3-hour period at the rate of about 1,335 bbl. daily.

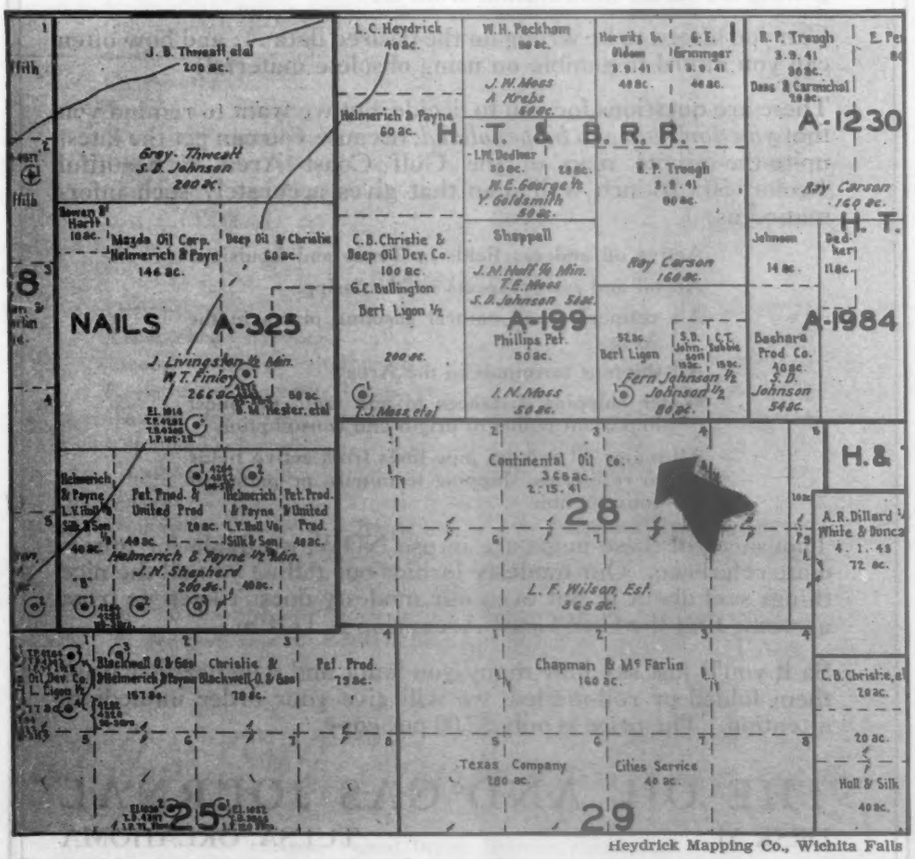
Also in Archer County and indicating a new well in the recently discovered Griffin pool, Deep Oil Development Co. and E. P. Griffin No. 3 Waggoner, Section 1, Block 4, H.&T.C. Survey, south offset to the discovery well, is reaming down to core ahead after coring into saturated sand at 4,429 ft. Operators will core into the sand and set casing for a test. Possible shallow production for the Archer City townsite of Archer County was seen when Bert Davis No. 1 Powers, in Block 19, two blocks south of the Archer County courthouse, drilled oil sand from 1,314-16 ft. and began setting casing for a test. Gunsite lime was topped at 1,301 ft.

Montague County

A new deep wildcat test for southwestern Montague County and completion of the third producer in the Burnett field a mile west of the town of Nocona led development in Montague County. The new wildcat is Sorrells No. 1 T. H. Brown, Block 58, G. E. Nabours Survey, Abstract 1416. The Burnett field completion was the Stanolind Oil & Gas Co. No. 1 Zachery, west offset to the discovery well and was gaged at 123 bbl. in 3 hours. Bottomed at 4,661 ft., the well found tight sand at 4,644-54 ft. and was shot with 10 qts. About 2 miles east of the town of Nocona and some 3 miles east of the field Sinclair Prairie Oil Co. No. 1 Whaley, having missed the 4,600-ft. pay horizon for the field, is drilling below 4,868 ft.

Clay County

Narrowing the Clay County Strawn exploration play to a north-south trend from the Halsell pool to the Burns pool, several widely outlying wildcat tests have been dry and abandoned during the past week or two. Northeast of the play John E. Farrell No. 1 Claude Malone, Block 12, T.&N.O. Survey, 5 miles southeast of Henrietta, was bottomed at 5,550 ft. and preparing to make an electrical survey of the hole. It has run low on structure and has not reported any suitable shows of oil or gas. West of the play Frabor-Hodges Corp. and Mid-Union Drilling Co. No. 1 Kinder, Lot 11, Block 2, Clark and Plumb Survey, drilled sand showing oil from 5,276 ft. to 5,279 ft. and cored to 5,289 ft recovering hard sand showing some oil. It is reaming down to drill ahead. Commercial production is believed possible as several shows have been drilled.



Heydrick Mapping Co., Wichita Falls

The Hull-Silk and Sikes pools of northern Archer County may be connected by Bert Ligon No. 1 Johnson which came in for one of the best wells in either field

EASTERN TEXAS

DALLAS, Tex., July 10.—New wildcat location for Smith County, indicated failure for a Rusk County test, abandonment of a Limestone County operation, and activity in the Mabank pool of Henderson County and the Opelika area of Henderson County, led the week's work in the eastern Texas area.

Derrick is going up for the new Smith County wildcat, staked by O. L. Ross and others as No. 1 W. P. Rushing, 29-acre tract in the J. Herrin Survey, a mile east of Whitehouse, southern part of the county. Now waiting on orders, Golden Rod Drilling Co. No. 1 Wood, Rusk County wildcat about 2 miles northwest of New Salem, finished contract at 4,012 ft. with no shows reported. It was seeking the pay found in the Lone Star pool of Cherokee County a few miles to the southwest. The Limestone County abandonment was Zephyr Oil Co. No. 1 Peeples, over a mile southwest of Tehucana, which quit with no shows at a depth unreported.

Third producer in the Mabank field of Henderson County, Richards & Holloway No. 2 Humble-Bauguss is being completed as a pumping well due to lack of pressure. With the hole standing full of oil and occasionally slopping over, operators believe the well will make its 100 bbl. allowable despite the fact that the best shut-in casing pressure has been only about 100 pounds. The test is bottomed at 3,181 ft. and is 600 ft. southwest of the same company's No. 1 Humble-Bauguss.

Cooke County

Possibility of a producing horizon from the Simpson formation in the Walnut Bend field centered the development in Cooke County over the past week. Sinclair Prairie Oil Co. No. 10 Best, southeast corner of the Toby Survey, is bottomed at 5,565 ft. with 2,000 ft. of oil in the hole. Operators are tearing down the rig to move in spudder and clean out.

Opelika Area

Humble Oil & Refining Co., Tide Water Associated Oil Co. and Seaboard Oil Corp. have taken over from the contractor their No. 1 Scott, in the C. Bobb Survey, wildcat test 3 miles southwest of production in the Opelika area of Henderson County, and plan to take it deeper below the original contract depth of 8,500 ft. Unlike other tests drilled in the area on the structure, this one has had no shows of either oil or gas.

NORTH TEXAS COMPLETIONS

Archer County

Andrews & King No. 1 Andrews, 1,002 ft., dry. L. T. Burns No. 4 Prideaux, 903 ft., dry. L. T. Burns No. 1 A. Schlumpf, 926 ft., dry. H. H. Fraser No. 1 W. M. Coleman, 2,480 ft., dry. Hammon, Hanlon & Buchanan, Inc., No. 3 W. P. Ferguson, 3,772-3,871 ft., 465 bbl. C. A. Johnson No. 1 Abercrombie, 1,293-1302 ft., 12 bbl. W. B. Omohundro No. 1 A. B. Peckham, 5,159 ft., dry. Underwood Oil Co. No. 1 G. A. Key, 1,448 ft., dry.

Clay County

L. T. Burns No. 1 C. L. Wynn, 5,202 ft., dry. G. W.

(Continued on Page 106)

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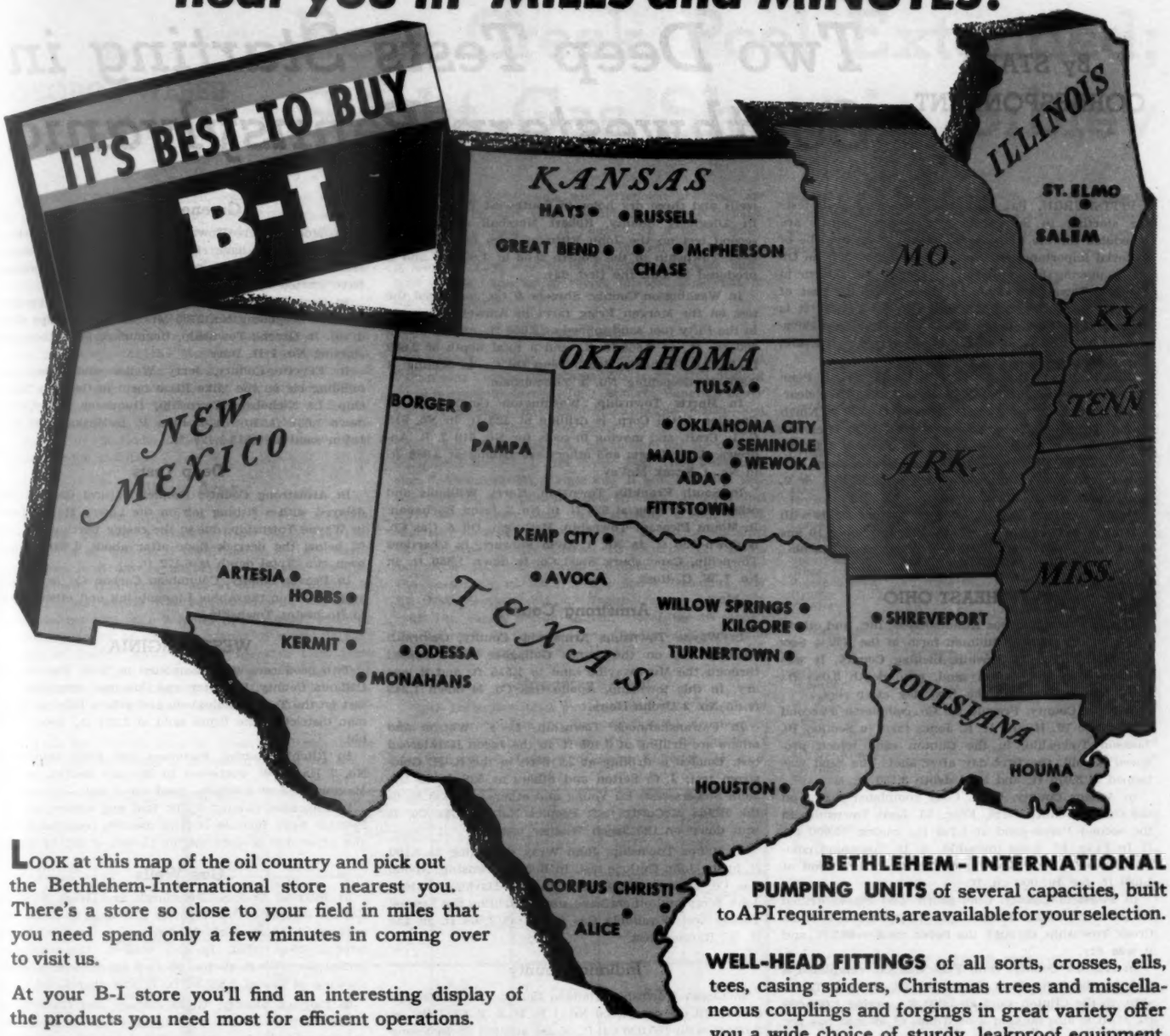

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Eastern Field Report

By STAFF CORRESPONDENT

Two Deep Tests Starting in Southwestern Pennsylvania

PITTSBURGH, Pa., July 10.—Two new deep tests are starting in Southwest Pennsylvania which are scheduled for the Oriskany sand and which will be of material importance. In Butler County, South Penn Oil Co. is moving in on the M. A. Fowler heirs farm in Concord Township, about 12 miles north 17° east of the city of Butler. On the Hilliards quadrangle, it is located Lat. 41.01°, Long. 79.48° with a surface elevation of 1,231.68 ft., and not on prominent structure. The contractors are Fox and Foley.

On Chestnut Ridge in Fayette County, New Penn Development Co., William E. Snee and others are clearing a location on the Piedmont Coal Co. lease in North Union Township. It is approximately 2,300 ft. north of the Summit Hotel (Neyn) No. 2 and about 1,400 ft. north of J. H. Sorg No. 1. It is starting at a lower surface elevation than either Summit Hotel Nos. 1 or 2. It is about 350 ft. north of Route 40.

Operations increased in the lower eastern fields with a total of 28 wells of which 5 were dry holes, 16 gas wells, and 7 producers with a daily initial of 323 bbl., most of which was in Southeast Ohio.

SOUTHEAST OHIO

The best producer was Kundtz-Hulse, Inc., and others No. 3 on the Madison Billman farm in the NW¼ Section 12, Fallsbury Township, Licking County. It was completed in the Clinton sand, total depth 3,085 ft., and produced 125 bbl. the first day after shot.

In Knox County, Preston Oil Co. completed a second test on the W. H. and R. L. Jones farm in Section 10, Jackson Township, in the Clinton sand which produced 83 bbl. the first day after shot. The sand was topped at 3,075 ft. and total depth 3,130 ft.

In Athens County, C. A. Cody completed a test on the Goldie Colmer farm, Frac. 13, Lodi Township, in the second Berea sand at 1,746 ft., gaging 75,000 cu. ft. In Frac. 17, same township, A. D. Townsend completed No. 2 John Hartley, in the same formation at 1,680 ft. for 100,000 cu. ft.

In Fairfield County, Glen Sturm and others drilled on the J. E. Musser farm in the NE¼ Section 9, Rush Creek Township, through the Berea sand to 665 ft. and it was dry.

In Holmes County, Ohio Fuel Gas Co. completed a test on the John Hart farm, Lot 23, Monroe Township, in the Clinton sand at 3,380 ft., gaging 1,000,000 cu. ft. It is also making 2 or 3 bbl. of oil and has not been shot.

In Medina County, Preston Oil Co. completed Bertha B. and J. J. Parent No. 31, Tract 16, Section 5, Chatham Township, in the Berea grit at 407 ft. It produced 50 bbl. the first day after shot. In Tract 16, Lot 10, same township, this company completed the No. 3 James and Glen Garver in this formation at 435 ft. and it produced 18 bbl. the first day after shot.

In Perry County, Preston Oil Co. completed a test on the J. Harlin farm in the NE¼ Section 8, Reading Township, in the Clinton sand at 2,980 ft., good for 400,000 cu. ft. In Monroe Township, Corning Producing Co. drilled on the Henry Weaver farm in the NE¼ Section 16, through the Clinton sand to 3,837 ft. and it was dry with only a small showing of oil.

In Mahoning County, Tri State Gas Co. test on the T. W. Baird farm in the northeast corner of Poland Township, about 100 ft. from the state line, is drilling at 250 ft.

In Cuyahoga County, Benedum & Trees are drilling at 2,990 ft., deepening the J. V. Whitbeck test in Mayfield Heights village, from the Newburg to the Clinton sand. Their test on the Ford lease is down 2,075 ft. and on the Sowin farm at 1,890 ft.

SOUTHWEST PENNSYLVANIA

Operations consisted of one producer, three gas wells and three dry holes in Southwest Pennsylvania. In Allegheny County, Robert Marshall completed a second test on the John Rittman heirs farm in West Deer Township in the Fourth sand at 1,800 ft. and it produced 35 bbl. the first day.

In Washington County, Shivers & Co. completed the test on the Morgan Prigg farm in Amwell Township in the Fifty foot sand topped at 2,653 ft., gaging 1,200,000 cu. ft., at 2,668-76 ft., and a total depth of 2,682 ft. In this township, South Penn Oil Co. is drilling at 2,870 ft. deepening No. 1 Zimmerman.

In Morris Township, Washington County, Union Gasoline & Oil Corp. is drilling at 525 ft. in No. 818 G. L. Craft, and moving in tools for No. 819 J. R. Andrews. A. V. Lewis and others are fishing at 3,088 ft. in No. 1 Frank McVay.

In South Franklin Township, Harry Williams and others are drilling at 925 ft. in No. 3 Jason Buchanan. In Mount Pleasant Township, McGuigan Oil & Gas Co. is down 930 ft. in No. 1 Alvin Stewart. In Chartiers Township, Canonsburg Steel Co. is down 1,550 ft. in No. 1 W. G. Ross.

Armstrong County

In Wayne Township, Armstrong County, Galbraith Drilling Co., on the James Gallagher farm, drilled through the Murraysville sand to 1,515 ft. and it was dry. In this township, Apollo Gas Co. is down 1,245 ft. in No. 2 Drohn Heirs.

In Cowanshannock Township, L. F. Watson and others are drilling at 3,465 ft. in the Jacon Harkleroad test; Louden is drilling at 2,716 ft. in the R. H. Goldstrom test; J. C. Sefton and others at 528 ft. in the John Sowers test; Ed Young and others at 1,830 ft. in the Wilda McCurdy test; Peoples Natural Gas Co. is shut down on the Jacob Wagner test.

In Manor Township, John Wray is drilling at 3,100 ft. in the John Guthrie test. In Boggs Township, Apollo Gas Co. is down 1,824 ft. in the Ed Harkleroad test; John Wray and others have started drilling the Samuel Yockey test; Equitable Gas Co. is at 2,506 ft. in the D. W. Raraigh test.

Indiana County

In Center Township, Indiana County, T. W. Phillips Gas & Oil Co. completed No. 1 B. R. & P. Coal Co., at 3,158 ft. with 105,000 cu. ft. of gas at 1,951 ft. In Young Township, on this lease, this operator drilled No. 2 to 3,127 ft. and it was dry. In West Mahoning Township, on the Thomas Steffey farm, in the Thirty Foot sand, it has a well gaging 126,000 cu. ft. In Rayne Township, Dr. Meham and others abandoned the test on the Dr. Mehan lease at 3 559 ft. as dry.

In Washington Township, Equitable Gas Co. is fishing at 2,791 ft. in the J. J. Potts test, and drilling at 138 ft. in the B. M. Parks test. In West Mahoning Township, T. W. Phillips Gas & Oil Co. is down 2,790 ft. in the Sarah Lewis test.

Clarion-Westmoreland

In Porter Township, Clarion County, Apollo Gas Co. has made a location for No. 4 Lou Emma Brinker. In Limestone Township, Clarion County, Squirrel Hill Gas Co. is down 700 ft. on the N. A. Sloan farm.

In Elk Township, Clarion County, Dempseytown Gas Co. is drilling at 4,100 ft. in the deep test on the George C. Wilson farm which is scheduled for the Oriskany. In Clarion Township, Owens-Illinois Glass Co. has reached 250 ft. on the J. E. Reinsel estate.

In Westmoreland County, Peoples Natural Gas Co. is drilling out old 2-in. at 1,650 ft. and getting ready to deepen No. 1 George T. Crawford, in Allegheny Township.

Greene County

In Monongahela Township, Greene County, O. I. Dille and others have rigged up on the John Barclay farm. In Richhill Township, A. Phillips and others have started drilling on the E. Shepard farm.

In Center Township, Equitable Gas Co. has reached 2,890 ft. deepening No. 2735 Mrs. George Phillips (Fordyce). In Greene Township, Brummage and others are starting No. 1 H. Durr.

In Fayette County, Jerry Weller and others are building rig on the Mike Risso farm in German Township. In Nicholson Township, Duquesne Gas Co. is down 1,631 ft. in No. 2 John P. DeMaske, with Big Injun sand at 1,318-1,427 ft.

Deep Tests

In Armstrong County, Peoples Natural Gas Co. are delayed with a fishing job on the Lowry Martin farm in Wayne Township, due to the casing parting at 1,200 ft. below the derrick floor after about 6,300 ft. had been run. Total depth is 6,572 ft.

In Beaver County, Columbian Carbon Co. is drilling at 4,890 ft. on the Abbie Linnenbrink and others lease in Rochester Township.

WEST VIRGINIA

Two producers were completed in West Virginia. In Calhoun County, Hamilton and Coleman completed the test on the T. S. Cunningham and others farm in Sherman district in the Injun sand at 2,257 ft., good for 5 bbl.

In Ritchie County, Patterson and Pope completed No. 7 Harry W. Patterson in Murphy district, in the Maxton sand at 1,760 ft., good for 7 bbl.

In Pleasants County, F. R. Ball and others, on the Poynter heirs farm in McKim district, reported 5 bbl. and after shot is showing for 15 bbl. a day by flows.

Gas Wells

In Braxton County, Pittsburgh and West Virginia Gas Co. completed No. 7685 Ed L. Boggs, in Birch district, at 2,154 ft. with 250,000 cu. ft. at 2,083-96 ft. after a 40-qt. shot. In this district, this company drilled No. 7679 G. B. Howell to 2,282 ft. with a small showing of gas at 1,853-60 ft. It was abandoned.

In Calhoun County, Gunn, Gainer and Gum completed the test on the Whitt Stump farm in Sherman district at 1,980 ft., which, after a 100-qt. shot gaged 1,100,000 cu. ft. In this district, W. V. Knight completed the test on the Jasper Ball farm at 2,005 ft., the Injun sand, good for 100,000 cu. ft.

In Clay County, Pittsburgh and West Virginia Gas Co. completed No. 7687 J. D. Duffield, in Otter district, at 1,871 ft., gaging 2,500,000 cu. ft. before shot.

In Gilmer County, Elliott and Cain completed the test on the Scott Williams farm in DeKalb district at 1,852 ft. with 60,000 cu. ft. of gas before shot at 1,826-44 ft.

In Lincoln County, Left Fork Oil & Gas Co. completed the test on the Lucinda Lovejoy farm in Jefferson district, at 3,641 ft., with 134,000 cu. ft. of gas each from the Berea and Brown shale.

In Ritchie County, A. R. Kelley completed the test on the Clem Ingram farm in Grant district in the Keener sand at 1,395 ft., gaging 500,000 cu. ft.

Oriskany Gas Field

No wells were completed in the Oriskany sand in Kanawha County. In Union district, Ajax Gas Co. completed the test on the Perry Marks farm in the Brown shale at 4,053 ft., good for 150,000 cu. ft.

There were several new locations. In Poca district, United Fuel Gas Co. has one for No. 4853, W. H. O'Dell

(Continued on Page 102)

North Louisiana, Arkansas

By GEORGE WEBER

Bear Creek Pool Extended; Slight Gas Show in Sibley

SHREVEPORT, La., July 10.—Only a small amount of gas on a drill-stem test at 5,775 ft., plugged back from 10,383 ft., at a test in the Sibley area of Webster Parish; the completion of a new gas and distillate well for the Bear Creek area of Bienville Parish, and the staking of a new wildcat test for Grant Parish, led the developments during the week in the tristate area. The possibility of a third producer for the Stamps field of Lafayette County and completion of three new wells for the Magnolia area of Columbia County highlighted the activity in South Arkansas. The approaching production test for Arkansas Fuel Oil Co. No. 1 Abney, Waskom area, Harrison County, and the completion of a new well in the Marion County portion of the Rodessa field led activity in the East Texas border counties.

Sibley Area

A drill-stem test from 5,695 ft to 5,760 ft. at Union Producing Co. No. 1 Walker Unit, Section 30-18-8, Sibley area of Webster Parish, netted no commercial production and only a slight show of gas. For the test, cement retainer was set at 5,775 ft., packer at 5,671 ft., and casing was perforated with 200 shots. With testing tool open 2 hours the recovery was only a small quantity of gas; five stands of mud and four stands of muddy water with a brackish taste were recovered. The test had been drilled to a total depth of 10,383 ft. before plugging back. It is 2 miles northeast of the four gas and distillate producers in the area.

In the Bear Creek area of Bienville Parish, Hunt Oil Co. has completed a 24-hour gage on its No. 1 Loe, Section 2-16-6, mile east extension producer for the area. The well made 160 bbl. of distillate through ¼-in. tubing choke in 24 hours with a tubing pressure of 1,650 lb. and a casing pressure of 1,750 lb. It was the first well to be drilled in the area since 1937 and is expected to revive interest somewhat in the entire area.

Deep Tests

A 5,000-ft. wildcat test has been staked in Grant Parish and Lisbon Exploration Co. is reported making arrangements to deepen No. 1 Roberta Vaughan below 5,313 ft. in the Lisbon field of Claiborne Parish. Just across the Red River from Boyce and in Grant Parish, Longwood Oil & Gas Co. began moving in drilling equipment for No. 1 Mrs. Katie Bell Thompson, Section 5, Township 5n, Range 3w. It will seek the Wilcox sand at a depth of 5,000 ft. The company has 8,576 acres under lease in practically a solid block that surrounds the town of Boyce. In the Lisbon field of Claiborne Parish, Lisbon Exploration Co. is reported to have let contract to Olson Drilling Co. for the deepening of its No. 1 Roberta Vaughan, NW SE NW Section 36-21-5. Depth is now 5,313 ft. with 7-in. casing set on bottom. According to reports the hole will be deepened into the lower Marine sand and to 8,500 ft.

Shreveport Field

With three new tests getting under way, total number of operations in the Shreveport field was boosted to seven. The new tests are Hurricane Oil Co. No. 2 De Soto, W. C. Leisk and Harry Fotiades No. 1 B Sckolosk, and Harry Fotiades No. 1 Bath. Another comparatively new test is J. M. Harper No. 1 Waller which is drilling at 1,123 ft. after setting 13⅜-in. casing at 290 ft.

Production by Pools

Estimated daily gross production all companies week ending July 8:

NORTH LOUISIANA

	Barrels
Bellevue	545
Caddo light	4,460
Caddo heavy	2,460
Converse	530
Cotton Valley heavy	70
Cotton Valley light	*11,350
Cross Lake	7,225
De Soto and Red River	1,160
Elm Grove	260
Haynesville	2,925
Holly	75
Homer	2,735
Lisbon	3,200
Pleasant Hill	110
Rodessa	27,315
Sarepta-Carterville	†470
Sligo	975
Sugar Creek	240
Urania	2,750
Zwolle	2,850
Total	71,705

SOUTH ARKANSAS

Atlanta	270
Buckner	1,830
Champagnolle	1,890
El Dorado	1,695
Lewisville	110
Lisbon	250
Magnolia	10,325
Miller County	285
Nevada	620
Rodessa	3,975
Schuler	17,870
Smackover light	1,945
Smackover heavy	14,850
Stephens	565
Troy	1,035
Urbana	1,100
Village	925
Total	59,540

Texas side of Rodessa field 30,140 bbl. daily.

*3,835 bbl. is distillate.
†180 bbl. is distillate.

ARKANSAS FIELDS

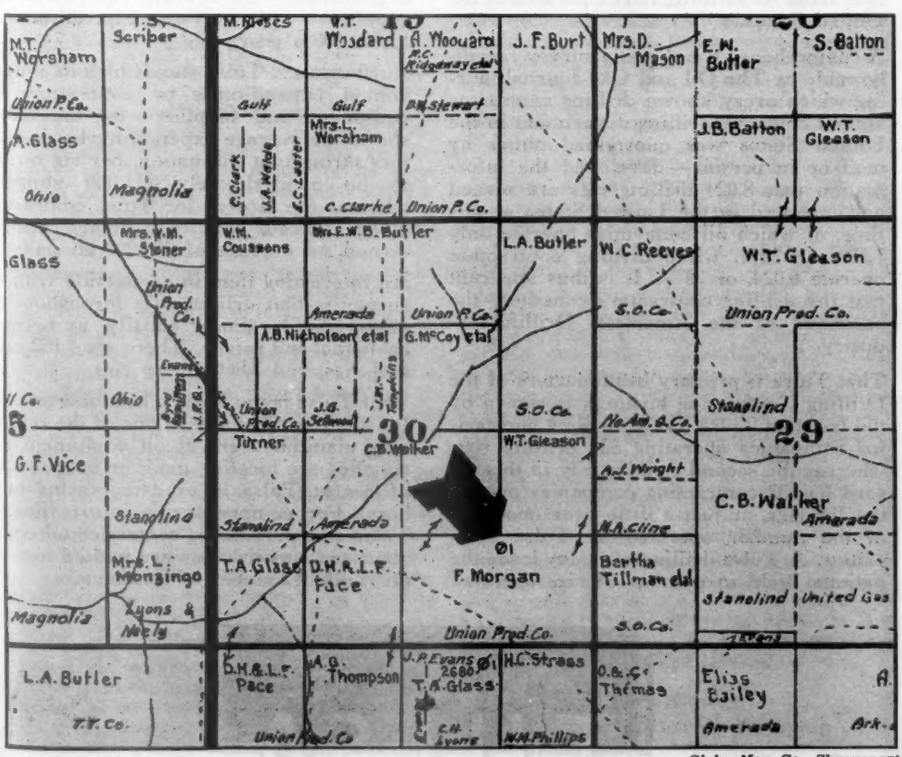
A total of 37 flowing producers has been completed in the Magnolia field of Columbia County. The latest completion was Phillips Petroleum Co. No. 1 L. A. Longino, SW SE Section 15-17-20, completed for a flow of 15 bbl. an hour through ¼-in. choke The porosity was topped at 7,417 ft. and depth to salt water was 7,640 ft. Grady Vaughn No. 1 L. Paschal, SE NW Section 22-17-20 was brought in at 7,520 ft. but no potential gage has yet been taken.

What was expected early in the week to be one of the largest wells in the Stamps field of Lafayette County was dimmed as the week closed when operators began swabbing the well, now flowing only small heads. The well is Erwin & Leach and East Texas Refining Co. No. 1 Cleve Warren, Section 24-16-24, credited with 56 bbl. of oil through ¼-in. tubing choke when first completed early in the week. Derrick was being moved from the test to the operators' No. 1-B Warren, a new location in the same section and 660 ft. south of the No. 1-A Warren.

Border Counties

Arkansas Fuel Oil Co. No. 1-B Abney, Blair Survey, Waskom area of Harrison County, was drilling out plug preparatory to perforating casing from 5,589 ft. to 5,616 ft. where the test showed wet gas estimated at 40,000,000 cu. ft. daily on previous drill-stem tests. Total depth is 5,952 ft. with 5½-in. casing

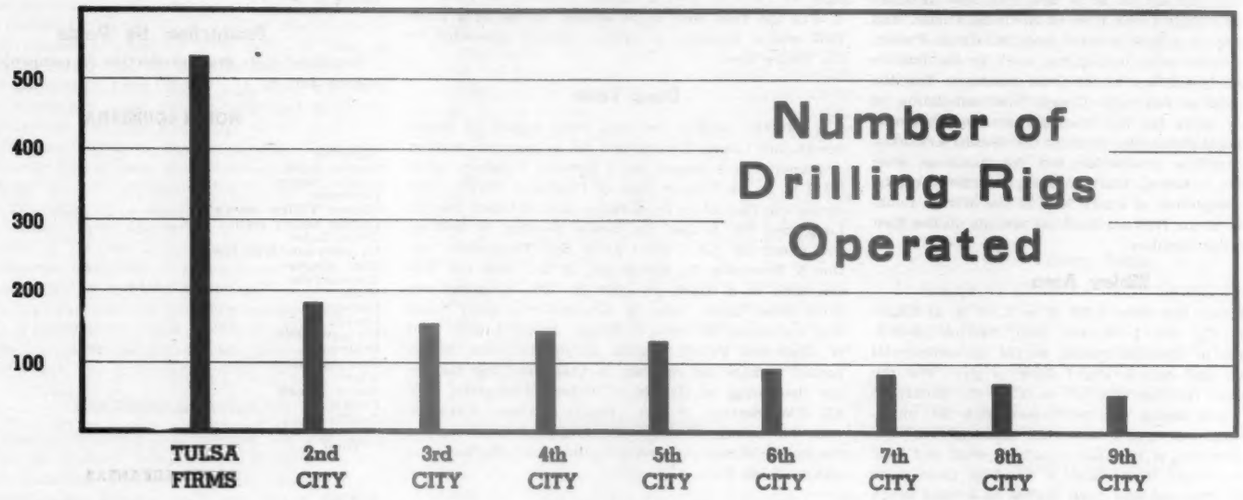
(Continued on Page 100)



Globe Map Co., Shreveport

In the deepest well recently drilled in the tri-state district, Union Producing Co. No. 1 Walker, production tests are being made higher up in the hole, as it plugs back from a total depth of 10,383 ft.

TULSA DRILLING CONTRACTORS OPERATE.....530 RIGS SECOND CITY.....189 RIGS



Few if any figures more strongly emphasize Tulsa's position as the World's Oil Capital, than those on Drilling Rigs Operated in the United States.

A comprehensive and costly survey recently made by The Oil and Gas Journal, during which every known drilling contractor and oil company drilling department in the United States was questioned either by mail or in person — developed the information that 8,024 drilling rigs are owned and operated in the United States at this time, of which oil companies operate only 1,820, or 22%, while drilling contractors operate 6,024, or 78%. It is thus apparent that the drilling contractors constitute the backbone of the American Drilling Industry.

That Tulsa is primary headquarters of the Drilling Contracting business is shown by the fact that Tulsa has 62 drilling contracting companies operating 530 drilling rigs, whereas the second ranking city in this regard has 32 contracting companies operating 189 rigs, or just a little over one-third of the number operated by Tulsa companies. A Tulsa drilling company leads the national field in number of rigs operated — with 63 rigs. Another Tulsa company leads the national field in annual average expenditures for drilling equipment and supplies — with average expenditures of $1,500,000 a year.

Furthermore, Tulsa stands high in average annual expenditures by contractors for equipment and supplies — for the survey shows the average expenditure by contractors throughout the nation, per rig owned, to be approximately $11,000 annually, whereas the figures for Tulsa contractors alone indicate that they spend, per rig owned, an average of $16,000 annually.

An interesting item in connection with the survey is that drilling rigs throughout the nation divide almost equally, as between cable tool and rotary. There are 4,162 cable tool rigs, and 3,860 rotary rigs.

That Tulsa is the leading headquarters city for this great business is one of the reasons why manufacturers of oil equipment and supplies are locating main or branch sales offices at Tulsa in ever increasing numbers. For comprehensive information on Tulsa as a purchasing center for oil equipment and supplies, you are invited to write the Tulsa Chamber of Commerce.

Why People PREFER to live in Tulsa

TULSA A SPORTS LOVERS' CITY

Tulsa's recreational facilities and status as a sports center are unusual for a city of her size. Her position in baseball is a case in point. "The Tulsa Oilers" have been in organized baseball for many years (for the past 6 years in the fast Texas League)—and have ranked consistently well in league standings. In 1936 the team represented its league in the Dixie League series and won that series.

Ideal facilities for practically every summer sport are offered, including golf, tennis, polo, sailing and outboard motor racing, fishing, horseback riding. The University of Tulsa always produces strong inter-collegiate teams in football and all other major and minor sports. The city's annual calendar of sporting events is comparable to any anywhere.

THERE ARE MANY OIL CENTERS BUT ONLY **ONE** OIL CAPITAL

Michigan Field Report

By
O. C. PRESSPRICH

Good Wells in Clare County; Isabella Gets New Producers

SAGINAW, Mich., July 10.—Isabella, once Michigan's leading oil center, returned to the list of new production counties, although rather inauspiciously, this week as Cities Service Oil Co. completed two deep tests in Wise Township (16n-3w) and got small producers. The wells are the first producers in that area in several months.

Clare County's Freeman-Redding field again claimed the spotlight so far as size was concerned with two completions accounting for well over half of the 10,130 bbl. in potential daily output that new wells of the week contributed to the Michigan total. Socony-Vacuum Oil Co. completed a well in Section 33 of Redding Township (19n-6w), which gaged 3,000 bbl. a day natural flow, while Pure Oil Co., completing another in the same section, rated its new producer at 2,320 bbl. a day. Pure Oil also chalked up an exception to the general rule of extra good wells in that field when a completion in Section 27 of Redding rated only 150 bbl. daily after application of acid to the stratum in the Clare field which produces oil at around the 3,900-ft. depth. Taggart Bros., Inc., completed a 1,800,000 cu. ft. gasser in Section 24 of Freeman (18n-6w) as the other development in that area.

A total of 33 completions was reported for the week, 11 tests being abandoned and production being concentrated in Allegan County's Salem field, in Walker Township of Kent County and Columbia of Van Buren. Most of the abandoned tests were wildcat wells. Among these, interest was keenest in the Missaukee County venture of McClanahan Oil Co., which did much to develop the Isabella County field a few years ago. The test, in Section 4 of Richland Township (21n-8w) was abandoned after persistent drilling halted at a depth of 4,160 ft.

Salem Field

Van Buren's Salem field, as usual, enjoyed a good week, all seven completions there being commercial wells with combined potential daily production of better than 2,200 bbl. Socony-Vacuum Oil Co. brought in the best well of the field in Section 15 (4n-13w), good for 700 bbl. a day. Smallest new producer in the Salem field was one rating 81 bbl. a day after acid in Section 2.

The new Isabella wells are in Sections 20 and 21 of Wise Township. Acidized, their production from depths of 3,704 and 3,709 ft., then was 25 bbl. a day.

McClanahan Oil Co. abandoned an effort to extend the Kent County pool in Plainfield Township (8n-11w) when drilling in Section 16 failed to get results even though the test went about 450 ft. deeper than most of the producers in nearby Walker Township. Barely a producer, rating only 10 bbl. a day, was a completion in Kent's Wyoming Township (6n-12w). That well, in Section 14, also was a deeper-than-usual hole, its total depth being 2,255 ft. All four Walker Township completions were commercial wells, their combined potential being a bit more than 2,000 bbl. a day and the best of the four being Swanson Consolidated Oil Co. No. 6 Johannes Van Dyke in Section 5, which got estimated daily production of 840 bbl. after the hole was acidized. Crown Development brought in one in Section 5 which was good for 500 bbl. a day. Wolverine Natural Gas Corp. and Smith Petroleum Co. completed the others.

Van Buren

Two of the five new completions in Van Buren's Columbia Township (1s-15w) were abandoned as dry holes and the three producers together total only 268 bbl. in production potential. One of the three was good for only 8 bbl. a day and in adjoining Bloomingdale (1s-14w) the one new producer rated only 25 bbl. and another test was abandoned as a dry hole. A Porter Township (4s-13w) test was abandoned.

In addition to the Missaukee wildcat failure, other dry holes were abandoned in Ottawa's Jamestown Township (5n-13w); St. Clair's Clyde (7n-16e); St. Joseph's Colon (6s-9w), as operators went ahead with plans for additional exploration. The weekly list of drilling permits issued by the state Conservation Department totaled 27, seven going to Allegan County, seven to Van Buren and six to Kent, Clare got two and Kalamazoo, Midland, Muskegon and Ottawa counties one each. The completion summary:

Allegan County

Lee Township (1n-15w)—Arthur Morris abandoned the No. 1 Tony Pope, NE NE NE Section 12, when the test failed to show oil at a depth of 1,344 ft.

Leighton Township (4n-11w)—Sun Oil Co., wildcatting, gave up its test in NE NE SW Section 24, abandoned the No. 1 David G. Thaler as a dry hole at a depth of 2,284 ft.

Salem Township (4n-13w)—Salem's seven completions were producing wells, all but two being better than the average for the field. Smallest completions were in Section 2. They are: Capital Oil Corp. No. 2 Fred Sutter, NE SE SW, 35 bbl. after the test was acidized, total depth of the well being 1,652 ft.; M. L. Jorgenson No. 1 Jacob Heibel, SW SE SE, rated at 150 bbl. after acid at completion depth of 1,606 ft., and Socony-Vacuum Oil Co. No. 1 Jacob Heibel, SE NE SE, which rated 81 bbl. a day after getting acid treatment on completion at 1,681 ft. Socony-Vacuum Oil Co. No. 1 Howard Loew, SE SW SE Section 3, completed at a depth of 1,628 ft., was rated at 500 bbl. a day after acid. Production rated 200 bbl. higher in Socony-Vacuum No. 3 F. A. Smith, NE SE SE Section 15, best new well in the field. The well was given acid treatment, total depth being 1,570 ft. Red-Man Oil Co., operating in Section 22, brought in two good wells. No. 4 Red-Cap Oil Co., W½ E½ NE, completed at 1,582 ft. and treated with acid, gaged 450 bbl. daily, while Red-Cap No. 5, NW SE NE, completed at the same depth and acidized, produced at 350 bbl. a day.

Clare County

Freeman Township (18n-6w)—Taggart Bros., Inc., added another moderate-size natural gas producer to its holdings by completing No. 6 N. H. Smith, C NW Section 24, at 1,509 ft. and getting flow of 1,800,000 cu. ft. daily.

Redding Township (19n-6w)—Unusual, because its production was so small, Pure Oil Co. No. A-4 B. E. Switzer, N½ SE SW Section 27, rated only 150 bbl. a day after being acidized. Completion depth is 3,912 ft. In Section 33, however, Pure Oil enjoyed the usual success when No. A-3 State-Clare, E½ E½ NW, completed at 3,884 ft. gaged natural production of 2,320 bbl. daily. The week's biggest well in Michigan in the same section, W½ W½ NE, was Socony-Vacuum Oil Co. No. B-3 L. B. Fell, which rated 3,000 bbl. a day at 3,892 ft. Both production figures were on natural flow.

Isabella County

Wise Township (16n-3w)—Cities Service Oil Co. completed two small wells for production, after the holes were acidized, of 25 bbl. a day each. The wells are the No. 1 Milford D. Drake, SE NE NE Section 20, completed at 3,704 ft., and the No. 1 John H. Smith, NW SE SW Section 21, total depth of which is 3,709 ft.

Kent County

Plainfield Township (8n-11w)—McClanahan Oil Co. failed in an effort to extend the Kent County development into Plainfield when the No. 1 Post Estate, SW SW NW Section 16, remained dry at 2,270 ft.

Walker Township (6n-12w)—Wolverine Natural Gas Corp. acidized No. 6 Rex Johnson, SE NW NW Section 4, at a total depth of 1,787 ft. to bring daily production to 350 bbl. Crown Development Co. completed No. 3 Rex Johnson, SE NE NE Section 5, at 1,785 ft. After being acidized, the well's production rated 700 bbl. a day. Best of the week in the new field was Swanson Consolidated Oil Co. No. 6 Johannes Van Dyke, SW SE NE Section 5, which had estimated production of 840 bbl. daily after being acidized. Completion depth is 1,802 ft.

Walker Township (7n-12w)—Smith Petroleum and others got a 200-bbl. well, acidizing and completing at 1,808 ft. No. 1 Van Euwin, SE NW SW Section 33.

Wyoming Township (6n-12w)—Freeland and Rogers, trustees, completed a well that was barely a producer, rating only 10 bbl. daily after being acidized. The well is No. 1 Kryan J. Whalen, SE NE NW Section 14, completed at 2,255 ft.

Ottawa County

Jamestown Township (5n-13w)—Freeman Oil Co. had its second failure in a wildcat test as the No. 1 Van Dam, NE NW SE Section 31, was abandoned as a dry hole at a depth of 1,840 ft.

Missaukee County

Richland Township (21n-8w)—Freeman Oil Co. abandoned an expensive wildcat venture after drilling 4,160 ft. without finding oil in the No. 1 John S. Schut, W½ SW SE Section 4.

St. Clair County

Clyde Township (7n-16e)—Lee Brown, trustee, abandoned as a dry hole at 1,073 ft. the No. 1 Marvin, SW NE NW Section 28. It was a wildcat test.

St. Joseph County

Colon Township (6s-9w)—No. 1 John W. Jailer, SE SE NE Section 12, another wildcat hope, was abandoned by A. J. Hoyt and others after being drilled for 1,073 ft.

Van Buren County

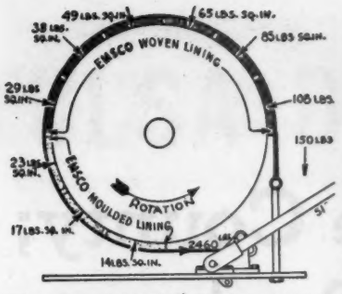
Bloomingdale Township (1s-14w)—One small producer and a dry hole marked Bloomingdale development. The failure was No. 8 William E. Miller, SW SE NE Section 24, owned by C. C. Goff and others, abandoned at a depth of 1,350 ft. The other, Wiser Oil Co. No. 11 Bruce M. Boyers, SW NE NW Section 17, was acidized to get 25 bbl. a day. Total depth is 1,211 ft.

Columbia Township (1s-15w)—Two of the five Columbia completions were dry holes. Harry W. Leman, trustee, No. 1 Strong, SE SE SE Section 3, after being acidized, produced 60 bbl. daily at total depth of 1,186 ft. Bridge Basin Oil Co. abandoned No. 2 L. P. Parisian, NE SW NW Section 13, at 1,253 ft. William P. Shoemaker No. 2 Warren Goble, SE SW SE Section 13, also was abandoned after 1,370 ft. of drilling. Clapsaddle, Harris & Fulton got a 200-bbl. well as their No. 4 Charles Pepper, SE NW NW Section 24, was completed at 1,159 ft. Production was from natural flow. Good for only 8 bbl. a day, Fisher & McCall No. 3 J. Moorehead, SW SW SE Section 1, was completed and acidized at 1,182 ft.

Porter Township (4s-13w)—Turner Petroleum Corp. abandoned the No. 1 S. Stern & Co., NE NE NW Section 35, at 1,551 ft.

Panhandle Eastern Report

Gross revenues of Panhandle Eastern Pipe Line Co. and subsidiaries for 12 months ended May 31 were $11,033,610, compared with revenues of $9,667,969 reported for the preceding 12 months. Sales of gas for the 12 months ended May 31, 1939, total 45,600,000,000 cu ft., compared with 40,800,000,000 cu. ft. for the 12 months ended May 31, 1938.



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Among the Drilling

PETRE & McCRACKEN of Centralia, Ill., had one of their mechanically driven rotary rigs ready to rig up on their No. 1 S. M. Roper, NE NW NE Section 9-1s-1e, Jefferson County, Illinois.

HELMERICH & PAYNE of Tulsa lost seven joints of drill pipe at 3,470 ft. in their No. 1 Hamilton County Land Bank, SE SE SE Section 6-4s-7e, Hamilton County, Illinois. They are trying to get over it but have not had any success.

KINGWOOD OIL CO., Effingham, Ill., spudded in its No. 1 Egyptian Lumber Co., C N½ NE NW Section 15-8s-10e, Gallatin County, Illinois. The derrick has been up waiting for the rotary tools for some time. The same operator is drilling at 2,000 ft. on its No. 1 Tullis, C E½ NE NE Section 29-3s-8e, White County, Illinois.

M. & G. DRILLING CO. No. 1 Franklin Realty Co., NE NE SE Section 26-6s-3e, Franklin County, Illinois, ran into difficulty at 2,962 ft. when the drill pipe stuck in the hole.

HOUSH & THOMPSON are rigging up for a 5,100-ft. wildcat in Goliad County, Texas, for Crown Central Petroleum Co. The well is on the Wood lease, Block 11, Keystone Royalty subdivision in the John Shear Survey. In the Addicks area, Harris County, the contractors' No. 1 Krey is being drill-stem tested after a showing of oil and gas was logged in a core at 7,247-57 ft.

ALLEN & MORRIS are completing two wells in the La Rosa field, Refugio County, Southwest Texas, for the Coronado Corp. and are drilling ahead on a third test for the same company. Two operations are reported in Nueces County for Shield Oil Co. and Union Producing Co., while in Refugio and San Patricio counties, two rotaries are running for Phillips Petroleum Co. and Seaboard Oil Co.

NOBLE DRILLING CO. opened a new oil field in the Gulf Coast district with the completion of Stanolind Oil & Gas Co. No. 1 Flowers, a wildcat in the Martha area, Liberty County, Texas. Casing was perforated at 8,104-08 ft., and the well flowed 150 bbl. in 15 hours through a 5/32-in. choke.

LOFFLAND BROTHERS have reached a depth of 12,496 ft. on Fohs Oil Co. No. 1 Buckley-Mahler in the DeLarge field, Terrebonne Parish, coastal Louisiana.

AL BUCHANAN DRILLING CO. is preparing to complete its first producer in the newly opened Minnie Bock field, Nueces County, Southwest Texas, as several hundred feet of pipe line oil was recovered by a drill-stem test in the 3,800-ft. pay.

L. T. (BOBBY) BURNS, Wichita Falls, has commenced drilling at his No. 1 H. T. Pickett, in the northeast corner of the Pickett 194 acres out of the W. W. Yearley Survey, Abstract 745, Clay County. It is contracted to 5,000 ft. and is about a half mile northeast of his No. 1 Browning, discovery well in the Burns pool.

BOSWORTH DRILLING CO., Odessa, Tex., which is drilling Big Lake Oil Co. No. 17-C University, the first Ordovician test in several years for the Big Lake field of Reagan County, West Texas, has set casing at 2,850 ft. The test topped the first shallow pay at 2,465 ft. and the main Permian lime about normal with other wells in the field. The test is in the NW cor. of Section 25, Block 9, University Survey, and a west offset to Big Lake Oil Co. No. 14-C University, Ordovician producer.

HELMERICH & PAYNE, Tulsa, have been awarded the drilling contract on a new wildcat test for Reeves County, West Texas. It will be a scheduled 4,500-ft. test in the southwestern part of the county and 7 miles west of the Pecos County line. The test is the Forest Development Corp., Abilene, No. 1 I. E. Scott, Section 286, Block 13, H.&G.N. Survey, 8 miles south of the town of Saragosa. The wildcat is on a core-drilled block of some 12,000 acres and cellar and pits have been dug and rotary material is being moved to the site. It will seek production from the Delaware sand and is about 9 miles northeast of a 5,965-ft. failure drilled last winter by Ohio Oil Co. in the Popham lands.

W. B. OMOHUNDRO, Wichita Falls, Tex., is drilling two new wildcat tests in North Texas, one each in Clay County and Montague County. Youngblood & Foree of Dallas and Ramsey Petroleum Corp. of Oklahoma City have let contract to Omohundro for their No. 1 Mrs. Ida Wynn, Section 2, G. Gowan Survey, Abstract 1063, 6 miles west of Belle-

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vue, Clay County. The test will be drilled with rotary to 5,000 ft. and will seek the Strawn pay found in the Browning and the Halsell pools. In the western portion of the Nocona townsite and in the Burnett pool of Montague County, Youngblood & Foree have awarded to Omohundro the contract for their No. 1 Ruth Davis, in the J. D. Jennings Survey. This test is about 2,500 ft. northeast of the discovery well and will be drilled to 4,500 ft.

HARRY MORGAN, Cotton Valley, La., is the drilling contractor on a new wildcat test staked near Boyce and in Grant Parish, North Louisiana. The test is the Longwood Oil & Gas Co. No. 1 A. G. Thompson, Section 5-5n-3w, across the Red River from Boyce. The company has 8,576 acres under lease in practically a solid block that surrounds the town of Boyce. Contract depth is 5,000 ft. and it will test the Wilcox sand.

VOORHEES DRILLING CO., Mount Pleasant, Mich., No. 1 Cummings, SE SW SE Section 30-7n-12w, a northern extension to the Walker field in Kent County, Michigan, topped the Traverse lime at 1,849 ft., was cased to 1,850 ft. and was preparing to drill in early in the week.

AMERICAN DRILLING CO. got another well on its 80-acre Newcomer lease in the Freeman-Redding (Van Horn) field, Clare County, Michigan. It was No. 2 Newcomer, C N½ SW SW Section 32-19n-6w, which produced 35 bbl. an hour from the Monroe lime at 3,855 ft., and 100 bbl. per hour when deepened to 3,890 ft. It was the second largest completion of the past week in that field.

KIRK-GREEN-WAY, INC., Atlas Life Building, Tulsa, is preparing to start work on a wildcat farm-out from Shell Oil Co., Inc., in Section 28-11-3, Pottawatomie County, Oklahoma, 3 miles north of Shawnee. The same company is completing No. 6 Brandon for the Mid-Continent Petraleum Corp. in the Ramsey field, Payne County, Oklahoma.

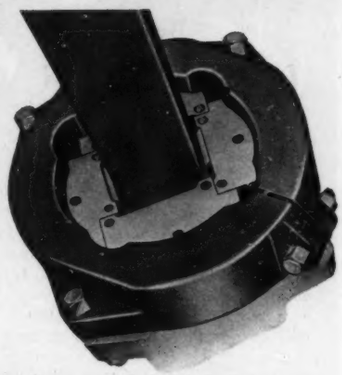
MABEE CONSOLIDATED CORP., Atlas Life Building, Tulsa, is starting work on No. 11 Rumsey for Cities Service Oil Co. in the Bemis field, Ellis County, Kansas.

JACK FRAZIER is rigging up for a deep wildcat in Fort Bend County, Texas, which will be drilled jointly with O. J. Martin. The well is on the Lillian Blakely lease, about 4 miles southwest of Clodine in the John Frederick Survey.

NELSON DRILLING CO. No. 1 Hodge, NW NW NE Section 25-20-6w, flowed 442 bbl. of oil a day on potential to extend the Barnholdt pool across the line from McPherson County, Kansas.

Henry Gist, tool pusher for Martin & Manning; C. F. Nicklos, drilling superintendent, Rocky Mountain division, Texas Co.; H. B. Gernet, field superintendent, Texas Co., Labarge, Wyoming, and Charles Carothuers, Baash-Ross Tool Co., Houston, on location at Texas Co. No. 1 Dry Piney, a deep wildcat in Sublette County, Wyoming. Picture courtesy of Houston Engineers, Inc.

SMOOTH GOING FOR YOUR KELLY



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California Field Report

By
L. P. STOCKMAN

Production in Coles Levee Field Extended Mile West

LOS ANGELES, Calif., July 10.—Standard Oil Co. extended the productive limits of the Coles Levee field of Kern County last week when No. 20-1 Kern County Land in Section 9-31-25 about 1 mile west of production was brought in flowing 2,150 bbl. of 53.8-gravity oil and 34,000,000 cu. ft. of gas from the Stevens zone with bottom at 9,216 ft. This is the largest flowing well completed in California in several months and indicates that No. 20-1 Kern County Land is in the gas cap area and also that there might be a direct connection between the Coles Levee and Tupman fields. The high-gravity oil produced by this well is characteristic of both fields. Richfield Oil Corp., soon after discovering the Tupman field, killed the discovery well to blank off the top part of the productive zone in order to reduce the extremely high gas-oil ratio. The Coles Levee field as it now stands covers a productive area of approximately 1,500 acres with Standard Oil Co. having production in Section 9, Ohio Oil Co. production in Section 10, Union Oil Co. having production in Section 11 and Tide Water Associated Oil Co. having production in Section 14-31-25. North of Ohio Oil Co. holdings in Section 10-31-25, Richfield Oil Corp. is drilling in No. 14-3-B Kern County Land in Section 3-31-25 at 9,040 ft., but has not yet found an oil sand sufficient to justify expectation of commercial production.

No. 20-1 Kern County Land, which extended the Coles Levee field 1 mile west, was finished with an 8⅝-in. water string landed and cemented at 8,417 ft. and 859 ft. of 6⅝-in. liner including perforations at 8,245-8,584 ft. and 8,694-9,055 ft., but on going into the hole the liner froze at 9,057 ft. and necessitated the use of an additional 182 ft. of 4½-in. liner including 158 ft. of perforated landed on bottom. Top of the productive Stevens oil zone was logged at 8,430 ft. and the hole finished with 9,007 ft. of 2½-in. tubing. The well was brought in flowing through a 32/64-in. tubing bean and a 96/64-in. casing bean but was shut in to conform with curtailment and conserve gas energy. Before the close of another week, Union Oil Co. should have No. 2-11 Kern County Land in Section 11-31-25 ready for production as it is making hole just on top of the pay. Ohio Oil Co., discoverer of the Coles Levee field, after completing two commercial wells in Section 10-31-25 has shifted its operations to Section 15-31-25 to the south and is drilling No. 3-F Kern County Land, which is at 8,200 ft. Ohio Oil Co. holds a lease on the north half of Section 15-31-25 totaling 320 acres while Tide Water Associated Oil Co. and Texas Co. own the lease on the remainder. Section 16-31-25 is split three ways with Texas Co. holding the lease on the north 320 acres, Shell Oil Co. the southwest 160 acres and Standard Oil Co. the southeast 160 acres. Standard Oil Co. will drill a well due south of this new producer and Ohio Oil Co. will return to section 10-31-25 and drill two offsets.

Coalinga District

R. S. Lytle, operating for Seaboard Oil Corp., Honolulu Oil Corp. and former stockholders of Petroleum Securities Co., completed another flowing well in the Southeast Coalinga field of Fresno County when No. 5-18-F in Section 18-20-16 was brought in flowing 2,950 bbl. of 31.8-gravity oil and 700,000 cu. ft. of gas from the Avenal zone of Eocene age with bottom at 7,486 ft. This well, bottomed in siltstone logged top of the glauconitic sand at 6,909 ft., cored top of the Gatchell oil sand at 7,037 ft. and found base of the productive member at 7,440 ft. The hole was finished with a 9⅝-in. water string landed at 6,964 ft. and 543 ft. of 7-in. liner including 421 ft. of perforated landed at 7,486 ft. It was not allowed to establish a maximum production test as the bean used upon completion, 24/64-in., was reduced to 4/64-in. after the well got under way. Pressure at present is 1,225 lb. on the tubing and 1,400 lb. on the casing indicating the well is capable of greatly exceeding its established initial which was partly computed. It is the second good well completed by this operator in the Southeast Coalinga field in 2 weeks as last week well No. 75-7-F in Section 7-20-16 was brought in flowing 1,500 bbl. nominally of 32.1-gravity oil and 800,000 cu. ft. of gas from 8,150 ft.

In the Northeast Coalinga field, about 4 miles due north of the Gatchell or Southeast Coalinga field, Amerada Petroleum Corp. ran into a gray water sand in No. 26-17 S.P.L. at 8,299 ft. after penetrating 140 ft. of rich heavily saturated Gatchell sand at 8,159-8,299 ft. and the bit is in the same gray sand at 8,816 ft. It is the first well in either the Northeast or Southeast Coalinga field to hit bottom water. This well is north of the discovery well and the limited amount of oil sand present and gray sand logged may prove of far-reaching importance from a production standpoint although its significance is not appreciated at present. It definitely tends to indicate that the area south and possibly west of the discovery shows more promise. This possibility should be determined soon as Bandini Petroleum Co. has recovered from a fishing job of several days and is again making hole. This well is down 7,090 ft. and Union Oil Co. No. 86-16 Cook, between the discovery well and No. 48-18 Webb of Bandini Petroleum Co., should reach the critical depth within two weeks. Wilshire Oil Co., working on the assumption that the Northeast and Southeast Coalinga fields may prove to be one large but irregular accumulation, is making preparations to drill about midway between the two areas in Section 30-19-16. South of the Southeast Coalinga field, Superior Oil Co. failed to recover the fish in No. 1 Pleasant Valley Farming Co. in Section 22-20-15 and is sidetracking at 8,340 ft.

West Montebello

The west end of the Montebello field of Los Angeles Basin, with 34 strings of tools in operation, is by far the most active field in California at present and will probably continue to head the list for several months as operators are centering their attention on the area south of Beverly Boulevard recently opened for deep-zone development by No. 1 Dore of Hathaway Oil Co. as an excellent flowing well. For several months, operators have been concentrating on the eastern end of the western extension and while this is still the most active section there is a very decided move toward the south where town lots are more plentiful

TANKER SHIPMENTS FROM LOS ANGELES TO DOMESTIC AND FOREIGN PORTS

	July 1		June 24			
	Total this week	Daily average	Total last week	Daily average	This year to date	Same time last year
Intercoastal-domestic—						
Crude oil	62,939	8,991	.....	.....	310,459	272,750
Fuel oil	81,898	11,700	73,849	10,550	1,173,653	.....
Diesel and gas oil	.....	.....	.....	.....	163,501	.....
Gasoline	282,180	40,311	107,257	15,322	1,883,121	1,579,203
Kerosene	.....	.....	.....	.....	122,200	199,453
Foreign exports—						
Crude oil	421,349	60,193	.....	.....	7,560,421	12,535,539
Fuel oil	184,372	26,339	84,695	12,099	4,500,522	4,461,659
Diesel and gas oil	258,008	36,858	235,069	33,581	3,491,861	2,931,385
Gasoline	.....	.....	158,240	22,606	3,735,443	3,594,243
Kerosene	.....	.....	.....	.....	773,750	578,111
Lubricants	20,897	2,985	23,191	3,313	86,122	15,584
Coastwise-domestic—						
Crude oil	175,129	25,018	200,149	28,593	6,067,221	5,622,826
Fuel oil	163,287	23,327	130,656	18,665	4,535,617	5,415,344
Diesel and gas oil	22,354	3,193	21,140	3,020	1,183,523	891,905
Gasoline	207,869	29,696	359,651	51,379	7,355,935	7,642,690
Kerosene	5,605	801	4,687	670	187,945	140,734

TANKER SHIPMENTS FROM SAN FRANCISCO TO DOMESTIC AND FOREIGN PORTS

Intercoastal-domestic—						
Fuel oil	.....	.....	.....	.....	124,055	.....
Diesel and gas oil	.....	.....	.....	.....	69,550	178,662
Gasoline	.....	.....	.....	.....	.....	9,499
Asphalt	.....	.....	.....	.....	280,447	346,862
Lubricants	.....	.....	.....	.....	14,182	13,665
Foreign exports—						
Crude oil	235,406	33,629	.....	.....	2,825,378	2,879,956
Fuel oil	46,178	6,597	59,381	8,483	1,581,719	1,060,946
Diesel and gas oil	20,146	2,878	154,332	22,047	1,206,338	1,156,390
Gasoline	40,145	5,735	61,983	8,855	1,522,900	3,152,549
Kerosene	20,611	2,944	34,237	4,891	366,647	449,603
Asphalt	.....	.....	.....	.....	42,968	56,258
Lubricants	20,197	2,885	1,140	163	306,990	206,282
Other finished oil	.....	.....	.....	.....	352	.....
Coastwise-domestic—						
Fuel oil	174,914	24,988	110,146	15,735	2,892,262	3,238,413
Diesel and gas oil	24,671	3,524	19,927	2,847	520,229	770,821
Gasoline	84,711	12,102	95,516	13,645	3,692,647	3,419,607
Kerosene	20,426	2,918	27,520	3,931	381,679	281,609

TOTAL TANKER SHIPMENTS FROM CALIFORNIA TO DOMESTIC AND FOREIGN PORTS

Intercoastal-domestic—						
Crude oil	62,939	8,991	.....	.....	310,459	272,750
Fuel oil	81,898	11,700	73,849	10,550	1,297,708	.....
Diesel and gas oil	.....	.....	.....	.....	233,051	178,662
Gasoline	282,180	40,311	107,257	15,322	1,883,121	1,588,702
Kerosene	.....	.....	.....	.....	122,200	199,453
Asphalt	.....	.....	.....	.....	280,447	346,862
Lubricants	.....	.....	.....	.....	14,182	13,665
Foreign exports—						
Crude oil	656,755	93,822	.....	.....	10,385,799	15,415,495
Fuel oil	230,550	32,936	144,076	20,582	6,082,241	5,522,605
Diesel and gas oil	278,154	39,736	389,401	55,629	4,698,199	4,087,775
Gasoline	40,145	5,735	220,223	31,460	5,258,343	6,746,792
Kerosene	20,611	2,944	34,237	4,891	1,140,397	1,027,714
Asphalt	.....	.....	.....	.....	42,968	56,258
Lubricants	41,094	5,871	24,331	3,476	393,112	221,846
Other finished oil	.....	.....	.....	.....	352	.....
Coastwise-domestic—						
Crude oil	175,129	25,018	200,149	28,593	6,067,221	5,622,826
Fuel oil	338,201	48,314	240,802	34,400	7,427,879	8,653,757
Diesel and gas oil	47,025	6,718	41,067	5,867	1,703,752	-1,662,726
Gasoline	292,580	41,797	455,167	65,024	11,048,582	11,062,297
Kerosene	26,031	3,719	32,207	4,601	569,624	422,343

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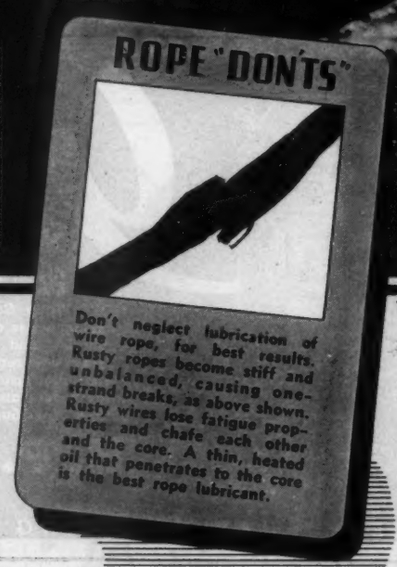
2 **"UNION-formed" 6x19 Filler Wire with Hemp Center,** for shallow rotary territory. This type of line has proved ideal for such shallow areas as East Texas.

3 **"UNION-formed" 6x16 Filler Wire with Hemp Center,** for Kansas fields. This line was designed by Union engineers especially for use in Kansas, and it definitely overcomes difficulties experienced by Kansas operators with other constructions.

Recent experience has proved that pre-formed rope, though slightly higher-priced, makes the most economical Rotary Drilling Line. This is because Rotary lines must withstand severe bending, drum-grinding and crushing. "UNION-formed" lines are slower to fatigue under repeated bending because the individual wires and strands are stress-free as laid into the rope. It also wears longer under drum grinding and crushing because the exactly formed wires unite their strength to give the rope a firm body—and because when outside wires become worn they do not arch in the strand but lie flat.

The photograph was taken at a Superior Oil Company well just outside of Shreveport, drilled by F. W. Martin & Company. The men, left to right, are: R. N. McDowell, derrick man; J. A. French, helper; W. J. Craig, foreman; J. C. Sartor, derrick man; J. E. Womack, driller; C. C. Gilger, drilling supt.; C. M. Womble, driller; W. J. Morris, fireman; Paul Cooper, H. M. Markham, and J. C. Carroll, helpers; C. C. Robinson, Union Wire Rope Corp.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Don't neglect lubrication of wire rope, for best results. Rusty ropes become stiff and unbalanced, causing one-strand breaks, as above shown. Rusty wires lose fatigue properties and chafe each other and the core. A thin, heated oil that penetrates to the core is the best rope lubricant.

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14-14.9	$.80	$.79	$.74	$.78	$.79	$.80	$.76	...	...	...	$.80	$.76	$.76	$.77	$.78	...	...	$.70	$.70	$.70	...	...	$.70	...
15-15.9	.80	.79	.74	.78	.79	.80	.76	...	...	...	.80	.76	.76	.77	.78	...	...	.70	.70	.70	...	...	.70	...
16-16.9	.80	.79	.74	.78	.79	.80	.76	...	...	...	.80	.76	.76	.77	.78	...	...	.70	.70	.70	...	...	.70	$.70
17-17.9	.80	.79	.74	.78	.81	.80	.76	...	...	...	.80	.76	.76	.77	.78	...	...	.70	.70	.70	...	...	.71	.70
18-18.9	.80	.79	.74	.78	.84	.80	.78	...	...	...	.82	.76	.76	.77	.78	...	...	.70	.70	.70	...	...	.73	.72
19-19.9	.82	.79	.74	.82	.87	.84	.81	...	...	...	.85	.76	.78	.77	.78	...	$.70	.74	.74	.71	$.70	...	.75	.74
20-20.9	.85	.79	.74	.85	.90	.88	.84	...	...	...	.88	.78	.82	.77	.80	...	.70	.78	.78	.72	.70	...	.77	.77
21-21.9	.88	.79	.74	.89	.93	.93	.88	...	...	...	.91	.80	.85	.77	.84	$.78	.73	.82	.82	.74	.70	...	.79	.80
22-22.9	.92	.82	.74	.92	.96	.98	.92	...	...	...	.93	.84	.89	.79	.88	.78	.77	.87	.86	.78	.72	...	.82	.83
23-23.9	.95	.86	.77	.96	.99	1.02	.96	$.84	$.79	...	.96	.88	.93	.82	.92	.78	.80	.92	.90	.82	.76	...	.85	.86
24-24.9	.99	.91	.80	1.00	1.02	1.06	.99	.88	.81	...	.99	.91	.96	.85	.96	.82	.84	.97	.94	.86	.79	...	.87	.88
25-25.9	1.03	.95	.82	1.03	1.05	1.11	1.03	.93	.83	...	1.02	.95	...	.89	.99	.86	.88	1.01	.98	.90	.88	...	.90	.91
26-26.9	1.06	1.00	.85	1.07	1.09	1.16	1.06	.98	.86	...	1.05	.98	...	.92	1.03	.90	.91	1.06	1.02	...	...	...	.92	.93
27-27.9	1.10	1.05	.88	1.11	1.12	...	1.10	1.03	.88	...	...	1.02	...	.96	1.06	.95	.95	1.10	1.06	...	...	...	.95	...
28-28.9	1.14	1.10	.90	1.14	1.15	...	1.14	1.07	.90	...	...	1.06	...	.99	1.10	.99	.99	1.15	1.10	...	...	...	.97	...
29-29.9	1.17	1.15	.93	1.18	1.18	F.O.B.	1.17	1.12	.93	...	...	1.09	...	1.03	1.14	1.03	1.02	1.20	1.14	...	...	...	.99	...
30-30.9	1.21	1.19	.95	1.22	1.21	our	1.21	1.17	.95	F.O.B.	...	...	...	1.07	1.17	1.08	1.06	1.25	1.18	...	...	...	1.01	...
31-31.9	...	...	...	...	1.24	Pipe	1.24	1.22	.97	Ship	...	...	...	1.11	1.21	1.12	1.09	1.29	...	...	...	...	...	...
32-32.9	...	...	...	...	1.27	Line	1.27	1.27	1.00	...	...	...	...	1.14	1.25	1.16	1.13	1.34	...	...	...	...	...	...
33-33.9	...	...	...	...	...	...	...	1.32	...	1.28	...	...	...	1.18	1.28	1.20	1.17	1.38	...	...	...	$1.19	...	...
34-34.9	...	...	...	...	...	...	...	1.37	...	1.32	...	...	...	1.22	1.32	1.25	1.20	...	...	...	...	1.23	...	...
35-35.9	...	...	...	...	...	...	...	1.42	...	1.35	...	...	...	1.25	...	1.29	...	...	...	...	...	1.27	...	...
36-36.9	...	...	...	...	...	...	...	1.46	...	1.39	...	...	...	1.29	...	1.33	...	...	...	...	...	1.31	...	...
37-37.9	...	...	...	...	...	...	...	1.51	...	1.43	...	...	...	1.32	...	1.37	...	...	...	...	...	1.35	...	...
38-38.9	...	...	...	...	...	...	...	1.56	...	...	...	...	...	1.36	...	1.42	...	...	...	...	...	1.39	...	...
39-39.9	...	...	...	...	...	...	...	1.61	...	...	...	...	...	1.40	...	...	...	...	...	...	...	1.43	...	...
40-40.9	...	...	...	...	...	...	...	1.66	...	...	...	...	...	1.43	...	...	...	...	...	...	...	...	...	...

Newhall, McKittrick, Kern River, Kern Front and Round Mountain, 70 cents for all grades. *Posted by Union Oil Co. Same company's Brea Canyon schedule stops at $1.14 for 28 degrees and over, and Belridge and Lost Hills schedule stops at $1.32 for 37 degrees and over. By Standard Oil Co., effective October 15; El Segundo, 14 to 18.9 degrees, 80 cents; 19-19.9, 82 cents; 20-20.9, 85 cents; 21-21.9, 88 cents; 22-22.9, 92 cents; 23-23.9, 95 cents, 24-24.9, 99 cents; 25-25.9, $1.03 26-26.9, $1.06; 27-27.9, $1.10; 28-28.9, $1.14; 29-29.9, $1.17; 30-30.9, $1.21. Wilmington, 14 to 16.9, 75 cents; 17-17.9, 77 cents; 18-18.9, 79 cents; from 19 degrees upward, prices same as Signal Hill.

and lease obligations more pressing. The limits of production have not yet been established to the north, south or west but at the present rate of development the western and southern limits should be determined within a few months. Completion of new wells and production characteristics indicate that the west end will be of secondary importance from a production standpoint although Kern Oil Co., Union Oil Co., Standard Oil Co., Union Oil Co. and a few others, principally those developing acreage instead of town lots, should come out ahead. A large number of operators will make little or nothing from a financial standpoint due to rapid decline and relatively high costs. Enforced curtailment due to issuance of an injunction prohibiting gas waste may prove a determining factor in many cases as this will prevent a few from dissipating the gas energy. Drilling costs approximate $65,000 for a single zone well but this increases proportionately as more hole is added and additional casing and liners are required.

During the week one new well and two former upper-zone producers were put on production. No. 32 La Merced of Union Oil Co. was brought in flowing 1,210 bbl. of 37.9-gravity oil and 2,080,000 cu. ft. of gas from the La Merced zone with bottom at 7,660 ft. Completed flowing through a 32/64-in. bean behind a tubing pressure of 1,330 lb. and a casing pressure of 1,800 lb., it was finished with a 7-in. water string landed at 7,424 ft. and 255 ft. of 5-in. liner including 236 ft. of perforated hung at 7,659 ft. and 7,622 ft. of 2½-in. tubing. Production is coming from both the upper and lower La Merced zone. No. 2 Manz of McVicar & Rood who operated in the Huntington Beach field with distinction has been returned to production flowing 1,625 bbl. of 36.5-gravity oil and 2,200,000 cu. ft. of gas from the La Merced zone with bottom at 7,600 ft. This rejuvenated well was brought in flowing through a 1-in. bean behind which it shows a tubing pressure of 450 lb. and a casing pressure of 800 lb. The hole was finished with a 9-in. water string landed at 6,202 ft. and 1,453 ft. of 6⅝-in. liner including 135 ft. of perforated landed on bottom and cemented through perforations at 7,490 ft. On a primary test last week the well tested wet but the recement job through perforations at 7,032 ft. resulted in a satisfactory water shut-off. The crew has been moved to No. 1 Beech south of Beverly Boulevard and preparations started to begin early work. Standard Oil Co., which has several large leases in the extreme western end of the west extension of the Montebello field completed No. 3 Braun flowing 925 bbl. of 38.1-gravity oil and 1,000,000 cu. ft. of gas after the hole had been redrilled and deepened to the La Merced zone with bottom at 7,625 ft. The pipe record consists of 6,410 ft. of 8⅝-in., 7,003 ft. of 6⅝-in., 664 ft. of 5-in. liner including 126 ft. of perforated landed at 7,624 ft. and cemented through perforations at 7,494 ft. and 7,586 ft. of 2½-in. tubing. Production is coming from the lower La Merced zone logged at 7,494 ft.

Wilmington

Tideland development in the Long Beach Harbor section of the Wilmington field of Los Angeles Basin is responsible for almost one-half of the total amount of drilling under way in that district now. Of this group about six wells are scheduled for completion within 10 days but their places will be taken by a similar number in conformity with lease provisions that stipulate the minimum amount of work that can be done without penalty. Five new wells were completed in the week but only one was a tideland well. This was No. 5-Y of Long Beach Oil Development Co., brought in flowing 235 bbl. of 27.8-gravity oil per day

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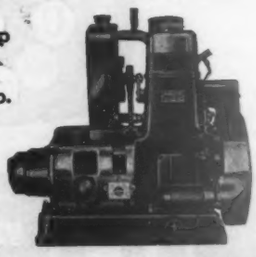

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198-B OAKLAND AVE. KANSAS CITY, MO.

from 3,989 ft. It was allowed to produce only from the lower Terminal zone through a 12/64-in. bean and shows a tubing pressure of 950 lb. and a casing pressure of 1,000 lb. It was finished with an 11¾-in. water string landed at 2,474 ft. and 1,533 ft. of 8⅝-in. liner carrying perforations at 2,471-2,871 ft., 3,529-3,984 ft. and cemented through perforations at 3,529 ft. and a 5½-in. flow string landed at 2,857 ft. The 2½-in. tubing had packers at 2,882 ft. and at 3,497 ft. To keep production within bounds production was restricted to lower Terminal zone although the pipe record is such that all three zones can be produced if desired. Union Pacific Railroad Co. has completed No. 16-E flowing 530 bbl. of 26.8-gravity oil through a 32/64-in. bean under a tubing pressure of 580 lb. and a casing pressure of 640 lb. It was carried to 3,995 ft. but plugged back to 3,975 ft. and finished with an 11¾-in. water string landed at 2,584 ft. and a combination 6⅝-in. and 8⅝-in. liner. The latter was hung at 3,647 ft. and carried perforations at 2,942-3,078 ft., 3,099-3,216 ft. ,3,303-3,484 ft., 3,495-3,575 ft. and at 3,585-3,636 ft. and the 6⅝-in. was perforated at 3,837-57 ft., 3,872-3,915 ft. and at 3,925-75 ft. The cementing points were through perforations at 2,935 ft., 3,301 ft., and 3,835 ft.

General Petroleum Corp., first operator to develop commercial production in the Wilmington field, completed No. 5 Blinn and No. 7 S.P., the former being put on production pumping 140 bbl. of 15.9-gravity from the Ranger zone and the latter being completed flowing 2,125 bbl. of 25.9-gravity through a 36/64-in. bean from the Terminal zone. No. 5 Blinn, which lacked sufficient gas for a natural flow, was finished at 3,250 ft. with an 8⅝-in. water string landed at 2,895 ft. and 422 ft. of 5⅞-in. liner including 357 ft. of 60-mesh perforations landed on bottom. No. 7 S.P. was bottomed at 3,678 ft. and finished with an 11¾-in. water string landed at 2,493 ft. and a 6⅝-in. liner carrying perforations at 3,000-3,220 ft., 3,370-3,535 ft., 3,575-3,655 ft., 3,695-3,775 ft. and at 3,948-4,080 ft. and was cemented through perforations at 2,997 ft., 3,367 ft. and at 3,945 ft. It was capable of greatly exceeding its nominal potential because no open flow test was conducted and the largest bean used was a 36/64-in. for a relatively short time. No. 8 Harbor of Wilton Oil Co. was completed flowing 260 bbl. of 14.4-gravity through a 30/64-in. bean behind a tubing pressure of 150 lb. and a casing pressure of 250 lb. This well was completed in the Ranger zone with bottom at 2,955 ft. It was finished with a 7-in. water string landed at 2,557 ft. and 413 ft. of 5¾-in. liner landed at 2,955 ft. and perforated at 2,560-2,655 ft., 2,678-2,730 ft., 2,770-2,847 ft. and at 2,905-55 ft. and 2,941 ft. of 2½-in. tubing with packer at 2,535 ft. The well, located in the town lot section, is holding up in good shape and may lead to the drilling of several additional wells.

Gas Fields

Standard Oil Co. completed another new gas field in the Delano gas field of Kern County during the week when No. 2-2 Tulare Farms in Section 34-24-23 was brought in flowing 5,000,000 cu. ft. of dry gas from 2,470 ft. This well was finished with a 6⅝-in. water string landed and cemented at 2,434 ft. and 89 ft. of 5¾-in. liner including 55 ft. of perforated landed on bottom. As few dry gas fields are permitted to produce gas for commercial consumption during the summer, this well was shut in immediately. Standard Oil Co. has two other potential producers ready for production tests and both should be passed for production within a few days. Trico Oil & Gas Co., which discovered this accumulation of dry gas in the Delano gas field, has a derrick up for No. 5 Title Guarantee & Trust Co. in Section 2-25-23 and should begin making hole within a few days. The revival of drilling operations reflects the installation of pipe line facilities by Southern California Gas Co. and Pacific Gas & Electric Co. recently. To justify this installation, it became obvious additional drilling had to be undertaken as the dry gas zones have not held up and required additional wells. The Delano gas field, which has produced only a limited quantity of gas, is only of secondary importance from a production standpoint, but is favored by drilling costs being relatively low. Up in Solano County, Standard Oil Co. has reached 5,540 ft. in No. 1 California Packing Co. in Section 15-5-2, but has not shown much encouragement. Present formation is a gray sand and the well still has a chance of finding a commercial accumulation. Texas Co. is laying a water line in the Eureka gas field of Humboldt County preparatory to starting work on No. 3 Eureka which will be drilled 2,978 ft. north and 3,340 ft. east of the southwest corner of Section 21-3-1. This company completed a small gas well last year but production was hampered by mechanical trouble and a well completed in good condition mechanically might show a much larger production. No work of any kind is being done in other California gas fields and it will be several months at least before any additional drilling.

Kern County

In the Round Mountain field of Kern County, Crestmont Oil Co. completed No. 6 Staley in Section 8-28-29 pumping 130 bbl. of 17.4-gravity oil from 1,575 ft. This well, which topped the productive Vedder at 1,543 ft., was finished with an 8⅝-in. water string landed at 1,555 ft. and 74 ft. of 6⅝-in. liner including 23 ft. of perforated landed on bottom and 1,420 ft. of 3-in. tubing. In the Kern River field, Italo Petroleum Corp. has completed No. 1 Judkins in Section 10-28-28 pumping 20 bbl. of 12.3-gravity cutting 3 per cent from 1,215 ft. after the hole had been carried to 1,286 ft. and plugged back because of bottom water. It was finished with a solid string of 5-in. casing landed and cemented at 1,281 ft. and then gun-perforated at 1,160-70 ft. and at 1,180-1,200 ft. and 1,090 ft. of 3-in. tubing. Richfield Oil Corp. got a water well in the southern part of the Wheeler Ridge field of Kern County when No. 1 Kern County Land in Section 28-11-20 came in flowing salt water testing 1,700 grains of salt per gallon. Bottomed at 11,004 ft., it was tested from the shoe of the 6⅝-in. casing at 10,815 ft. to bottom with the above results and as a consequence the crew is running a water witch to determine the source of the salt water. It cored some good-looking oil sand in the Oligocene although the porosity was not what might be desired. If this water is not in the formation a liner may be run for a test of the oil sand which showed some promise.

Petrol Corp. has gone back into the Tejon-Grapevine district in southern Kern County and will attempt to deepen No. 33-5 Reserve in Section 33-11-19 to the Rio Bravo zone. Previous wells have almost invariably hit granite and this area does not look as promising as a year or two ago. The district does produce a small amount of crude and gas but so far is of no special importance from a production standpoint. At the east end of Buena Vista Lake in Kern County contractors are building a 300-ft. trestle from the highway to a wildcat to be drilled by Richfield Oil Corp. in Section 36-31-25 and should have work completed within a few days. For a limited period each winter and spring, Buena Vista Lake contains water and it is necessary to take extra precautions in undertaking work. Richfield Oil Corp. wildcat will be designated as No. 81-36 Buena Vista Associates and it will be at the western end of the Buena Vista Lake gas field.

Coastal District

Up in the Santa Barbara Mesa district, which looked like a good oil field a few years ago but which failed to produce sufficient oil to justify drilling operations, Trans-Oceanic Oil Co. has completed No. 3 Mdivani pumping 100 bbl. of 15.5-gravity oil cutting 5 per cent from 1,575 ft. Operations in the Ventura Avenue field have greatly exceeded expectations and several wells are being started on the north flank where two excellent flowing wells have been completed. Ralph B. Lloyd has derricks going up for Nos. 3 and 4 on the Dabney-Lloyd property and one should begin making hole soon. British American Petroleum Co. has started its second well on the Hartman property held under lease by Bolsa Chica Oil Co. and since it is in close proximity to the company's recent completion it should result in good production. California Alliance Petroleum Co. has also started work on the north flank of the Ventura Avenue structure and may develop commercial production later. This field is a very difficult one to drill due to topography and hard subsurface formations. General Petroleum Corp. reconditioned No. 17 Barnard and returned it to production flowing 942 bbl. of 23.7-gravity along with 1,300,000 cu. ft. of gas from a depth of 8,350 ft. No. 40 Ventura Land & Water of Tide Water Associated Oil Co., which tested wet from 10,769 ft., has been recemented at 10,700 ft. but will be drilled out within a few days.

Los Angeles Basin

In the Rosecrans field of Los Angeles County, Union Oil Co. completed No. 32 Rosecrans flowing 320 bbl. of 31.7-gravity through a 35/64-in. bean from 7,610 ft. and should begin work on No. 33 Rosecrans at once as the derrick has been standing for more than a week

(Continued on Page 106)

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Search for Deep Production Is in Progress in West Texas

By
D. H. STORMONT

FORT WORTH, Tex., July 10.—Search for deep production held the spotlight in the central and south Permian basin area as the week closed with several wells in the North Cowden field of Ector County being drilled deeper, indication that a wildcat test in Andrews County will be carried to about 5,100 ft. and the staking of a 5,000-ft. wildcat test in Reeves County. Staking of a ¼-mile outpost has been reported for a recently opened area in Pecos County and the north basin area continues to be led in development by tests in the Wasson-Denver-Bennett field.

Deepening to the lower pay at 4,417 ft. on the east side of the North Cowden pool of Ector County, Sinclair Prairie Oil Co. No. 3 Hugh Corrigan, Section 25, Block 43, T.&P. Survey, has been completed for 3,633 bbl. of oil daily, flowing through casing. The initial is the fourth largest in the pool, the same company's No. 5 Corrigan, an east offset, having been completed for 4,899 bbl. daily for the largest potential. No. 3 Corrigan was first completed for 1,692 bbl. from a total depth of 4,336 ft.; however, after the record flow of No. 5 Corrigan, it was deepened and shot with 200 qts. Sinclair Prairie Oil Co. No. 6 Corrigan, also in Section 25 and to the east of the No. 5, was drilling below 4,400 ft. A wildcat test in Ector County which is indicating the linking of the North Cowden pool and the Johnson pool, Sloan & Zook No. 1 J. L. Johnson, Section 34, Block 43, T.&P. Survey, is drilling below 4,350 ft. with about 1,100 ft. of oil in the hole. The test has encountered several shows of oil and gas between 4,020 ft. and the present total depth.

North Cowden

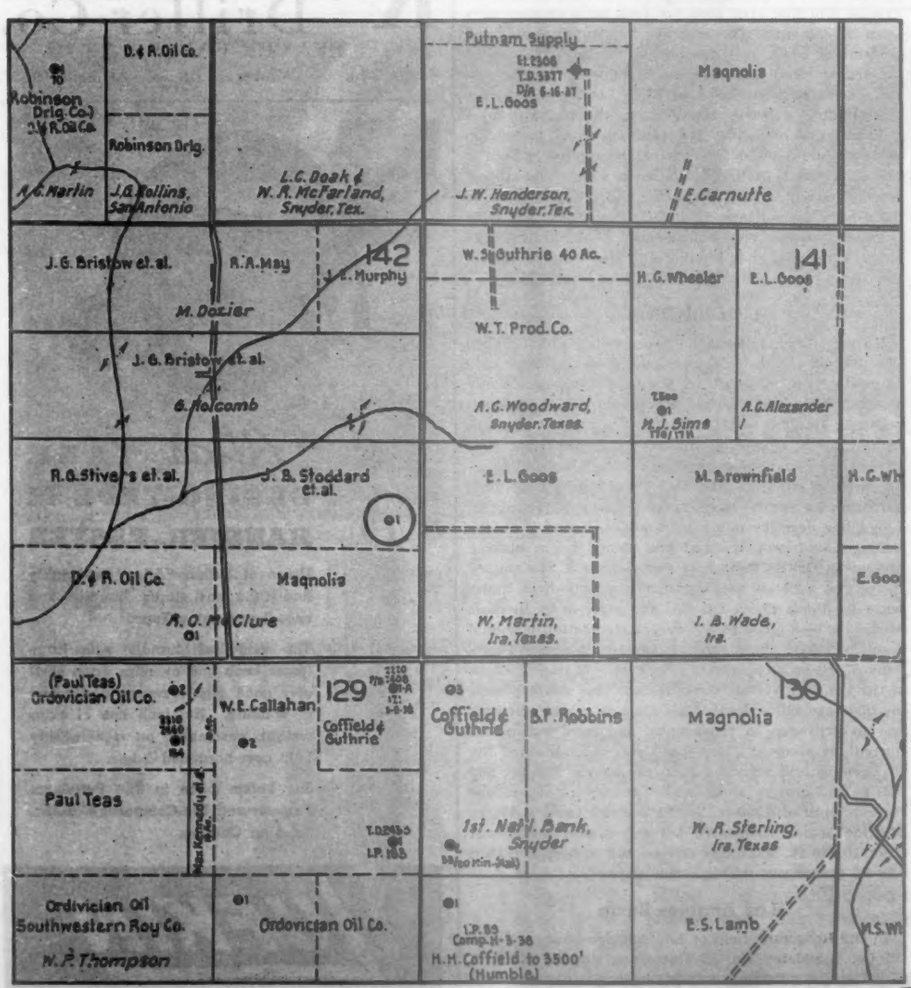
A possible test of the deep 5,150-ft. horizon opened by Gulf Oil Corp. No. 1 Holt in the North Cowden field of Ector County, was indicated at Richmond Drilling Co. and William F. Hanagan No. 1 University, wildcat test in southwestern Andrews County and about 18 miles northwest of the No. 1 Holt producer. Located in Section 25, Block 12, University land, No. 1 University is bottomed at 5,005 ft. Also in Andrews County and indicating a ½-mile west extension to the Fuhrman pool, Magnolia Petroleum Co. No. 1 Leta Jones, Section 11, Block 42-A, P.S.L. Survey, was attempting to obtain steady flow after acidizing with 2,000 and 5,000 gal. at 4,355 ft. to 4,390 ft. and 4,405 ft. to 4,425 ft.

A 4,500-ft. wildcat test in southeastern Reeves County, 7 miles west of the Pecos County line, has been staked by Forest Development Corp. of Abilene. The wildcat is to be drilled in the southeast corner of Section 286, Block 13, H.&G.N. Survey on the I. E. Scott lands. Location is on a core-drilled block of some 12,000 acres held by Forest Development Corp. and cellar and pits have been completed and machinery is being moved to the site. The test is 9 miles northeast of a 5,965-ft. failure drilled last winter by Ohio Oil Co. in the Popham lands.

Pecos County received an outpost location to its recently opened area south of the Fromme pool when Cordova Union Oil Co. prepared to spud its No. 2 fee, ¼ mile southeast of the Superior Oil Corp. No. 1 Skelly Crockett. Test is in Section 6, Block 110, T.C. Survey. The No. 1 Skelly-Crockett was completed for 20 bbl. of water and 26 bbl. of oil in 24 hours.

North Basin

The area between the Wasson-Denver field and the Bennett field of Yoakum County, which has been practically linked by recent drilling, will have a new producer as Aloco Oil Co. continues testing its No. 1 Mary Jordan, SW SE Section 764, about 1¾ miles northeast of No. 1 Brownfield producer. The well had been deepened from 5,150 ft. where it showed for 125 bbl. daily after two-stage acid treatment. The latest reported flow was an estimated 20 bbl. hourly from a total depth of 5,200 ft. A diagonal southwest offset to No. 1 Jordan has been staked by Aloco Oil Co. as its No. 1-C Willard, northeast corner of the west half of Section 801. Several tests in the area are nearing the pay horizon and if completed will strengthen the link of the two great Yoakum County fields. Also in Yoakum County and as a ½-mile north outpost to the recently opened Shell Oil Co., Inc., No. 1 Waples-Platter pool about 1¾ miles northeast of the Bennett pool, Devonian Oil Co. is preparing to drill its recently staked location in the southeast corner of Section 566. No. 1 Waples-Platter was completed for a pumping gage of 162 bbl. daily from a total depth of 5,312 ft. in June.



Southwestern Mapping Co., Fort Worth

Sharon pool in Scurry County has shown steady development since its discovery about a year ago and now has six producers and covers some 700 proven or semiproven acres

WEST CENTRAL TEXAS

Activity in Scurry County's Sharon pool and Coleman County's Morris pool, together with activity in Shackelford and Jack County, centered the week's development in the West Central Texas area.

Testing continued at J. B. Stoddard No. 1 R. O. McClure, promising north extension well for the Sharon pool of Scurry County. The pay section was shot from 2,282-2,338 ft. Test is in the north half of the southeast quarter of Section 142. The field has two drilling wells; D.&R. No. 1 McClure, Section 142, is below 670 ft., and Coffield & Guthrie No. 3 First National Bank of Snyder is nearing the pay at 2,110 ft. Operators in the field now total 10 and the number of wells drilled or being drilled to date total 11.

In Coleman County's area recently opened by Anzac Oil Corp. No. 4-C Morris, that company has halted drilling at its No. 5-C Morris and turned attention to No. 4 Overall, in the Overall pool, 6 miles south of Coleman. Efforts are now being made to drill around three lengths of casing. State Oil Corp. of Eastland and H. O. Wooten No. 3 W. R. Stockard has resumed drilling at 3,300 ft. The test is a mile west of Novice and in the southeast quarter of Section 23, T.&N.O. Survey.

Several tests, both deep and shallow, held attention in Jack County. T. D. Humphrey No. 3-A M. B. Cook, in the S.P. Survey, Abstract 552, south of the town of Bryson, indicates another good well at 2,888 ft. after having drilled plug from top of sand. Well is swabbing oil. It is 13 miles west of Jacksboro.

Shackelford County activity along the 3,200-ft. Palo Pinto trend centered the attention in that county. Northwest extension well to the Ivy pool, Tal Vez Oil Co. No. 1 J. S. McKeever, in the SE N½ SW Section 158,

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See Pages 1564-65 COMPOSITE CATALOG

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B.B.B.&C. Survey, flowed 35 bbl. hourly on test from the regular pay at 3,170 ft. The well afforded a ¼-mile spread to the producing limits. Several tests are either drilling or in the completion stages in the Ivy pool to make it one of the most active areas in the West Central Texas district.

Young County's activity was somewnat checked by the abandonment of Hull & Silk No. 1 H. N. Tucker, deep wildcat 2 miles southwest of Olney. The dry hole is in the southeast corner of Section 180, T.E.&L. Survey, and was quit at a total depth of 5,026 ft. The territory north of the Knox pool in the Graham area reported two completions, both by Trentman & Nunnelly. No. 1-A Guinn, northeast corner of Section 1974, T.E.&L. Survey, flowed 105 bbl. of oil in 8 hours from sand at 2,740-44 ft. The No. 1 J. K. Guinn, an offset, flowed 390 bbl. in 18 hours from 2,702-06 ft. The area around the town of Graham is one of the most active spots in North Texas at the present time.

An attempt for oil production in Tarrant County and 12 miles northwest of Fort Worth will be made at J. D. Beckelman No. 1 Mrs. Ola Bamble, between Lake Worth and Azle and 1¼ miles west of the highway. Test will seek production at around 500 ft.

WEST CENTRAL TEXAS COMPLETIONS

Brown County

J. D. Hart & Sons No. 4 W. J. Richmond, dry and abandoned at 1,315 ft. Curtis Norman No. 1 Tom Page, dry and abandoned at 965 ft. Western Well Servicing Co. No. 1 S. Y. Newson, dry and abandoned at 1,355 ft.

Callahan County

E. L. Thomas No. 1 H. H. Ramsey, dry and abandoned at 1,328 ft.

Comanche County

J. H. Whitesides No. 2 A. K. Anderson, 584-95 ft., 10 bbl.

Eastland County

Hoffman & Page No. 1 C. E. Hathcock, dry and abandoned at 3,636 ft. J. L. Reeves No. 1 J. Weaver, dry and abandoned at 1,648 ft. H. Trentman, Jr., No. 1 A. A. Tyler, 2,453-2,501 ft., 5 bbl.

Jones County

Fain-McGaha Oil Corp. and Sinclair Prairie Oil Co. No. 5 F. Olsen, 3,225-28 ft., 1,200 bbl. Gregg Oil Co. No. 2 E. D. Appling, 2,636-86 ft., 610 bbl. T. D. Humphrey No. 2 Guitar Estate, 2,140-49 ft., 104 bbl., old well drilled deeper. Iron Mountain Oil and Humble Oil & Refining Co. No. 3 O. Davis, 3,245-60 ft., 4,800 bbl. Ed C. Lawson No. 1 A. M. McNair, dry and abandoned at 2,185 ft. B. Omohundro No. 1 C. C. Gunn, 1,880-84 ft., 280 bbl. Petroleum Production Co. No. 1 Bryant-Link, 1,877-80 ft., 350 bbl. Ungren & Frazier No. 3 T. M. Culwell, 3,232-56 ft., 2,000 bbl. Ungren & Frazier No. 4 T. M. Culwell, 3,229-53 ft., 4,432 bbl.

Shackelford County

Hedrick Oil Co. No. 1 Carey, dry and abandoned at 2,025 ft. T. W. Lee and H. P. Key No. 3 T. W. Lee, 1,138-41 ft., 50 bbl. Owens-Snebold No. 2 J. S. McKeever, 3,140-3,200 ft., 1,716 bbl.

PANHANDLE FIELD COMPLETIONS

Gray County

Lone Star Gas Co. No. 1 T. R. Walton, dry and abandoned at 2,893 ft. Magnolia Petroleum Co. No. 3 J. S. Morse B, 2,682-95 ft., 192 bbl. Nabab Oil & Gas Co. No. 2 J. S. Morse B, 2,659-2,801 ft., 1,583 bbl. Shell Oil Co., Inc., No. 9 Haggard, 3,210-87 ft., 518 bbl. D. R. Tripplehorn No. 3 L. H. Webb, 2,605-62 ft., 107 bbl.

Hutchinson County

Continental Oil Co. No. 2 Carver, 3,009-3,150 ft., 5,410,000 cu. ft. of gas. Cree & Hoover No. 5 W. B. Haile, 2,965-3,039 ft., 951 bbl. Phillips Petroleum Co. No. 41 Cockrell Ranch, 2,967-3,060 ft., 258 bbl. Phillips Petroleum Co. No. 1 Jarvis, 3,194-3,245 ft., 151 bbl. Phillips Petroleum Co. No. 3 Supreme, 3,223-53 ft., 322 bbl. Power Petroleum Co. No. 3 W. B. Haile, 3,020-29 ft., 492 bbl. Harry Stackall No. 2 J. A. Whittenburg, 2,880-2,980 ft., 35 bbl.

Moore County

Canadian River Gas Co. No. 3-A J. M. Shelton, 2,406-2,966 ft., 18,700,000 cu. ft. of gas.

La.-Ark. Fields

(Continued from Page 89)

set on bottom. The test is a mile east of the Trinity series gas production of the area.

The Marion sector of the Rodessa field was given a new oil well when Cable Tool Drilling Co. completed No. 1 Smith, Hanks Survey, for 14 bbl. hourly through ¼-in. choke on tubing. Total depth of the new producer is 5,985 ft. Testing was under way as the week closed at Magnolia Petroleum Co. No. 1 Duncan, Davis Survey, in the same part of the field. Total depth is 6,002 ft. in the Young sand section.

NORTH LOUISIANA COMPLETIONS

Bienville Parish

Hunt Oil Co. No. 1 T. A. Loe, 4,200,000 cu. ft. of gas from total depth 6,678 ft.

Caddo Parish

Drillers, Inc., No. 1 Ellerbe, 25 bbl. daily from total depth 5,560 ft. M. M. Ferrell No. 1 Satterwhite, dry and abandoned at 2,263 ft. Natal Oil Co. No. 5 Stiles, 25 bbl. daily from total depth 1,024 ft. Natal Oil Co. No. 6 Stiles, 25 bbl. daily from total depth 1,036 ft. J. G. Strahan No. 1-A J. J. Hart, 90 bbl. daily from total depth 2,404 ft. Joe Strahan No. 1 Stiles, 60 bbl. daily from total depth 2,397 ft.

Tensas Parish

Continental Oil Co. No. 1 Cammach, dry and abandoned at total depth 4,172 ft.

ARKANSAS COMPLETIONS

Columbia County

In the Magnolia field, Hassie Hunt No. 1 Roy Couch, 25 bbl. per hour from 7,436-7,575 ft. Phillips Petroleum Co. No. 1 L. A. Longino, 19 bbl. per hour from total depth of 7,740 ft. Shell Oil Co. No. 1 Peoples Bank of Columbia, 27 bbl. per hour from 7,450-7,614 ft.

EAST TEXAS BORDER COMPLETIONS

Marion County

Cable Tool Drilling Co. No. 1 Sol Smith, 284 bbl. daily from 6,057-85 ft. Shell Oil Co., Inc., No. 1-E Henderson, abandoned location.

Rocky Mountain Area

(Continued from Page 82)

R. C. Tarrant No. 3 Yunck, SW SW NW Sec. 12-34n-6w. Drlg. 650 ft.

A. B. Cobb No. 1 Vargo, C SE NE Sec. 19-37n-4w. T.D. 2,660 ft.; cmt. failed to hold; recmtd. 7-in. on bttm.

Meagher County

Dan Drumheller No. 1 Moss Agate, SW SE NE Sec. 25-7n-7e. Drlg. 940 ft.

Teton County

R. C. Tarrant No. 1 Hoeschen, NE SE Sec. 34-27n-5w. R.O.G.

Toole County

Texas Co. No. 8 Swears, CEL SE Sec. 9-35n-2w. Drlg. 525 ft.

Big West Oil Co. No. 10 Dahlquist, CNL SW SE Sec. 21-35n-3w. Drlg. 1,440 ft.

Art Crabtree No. 1 Thompson, NE SE NW Sec. 35-35n-2w. T.D. 1,390 ft.; cmtd. 7-in.

R. G. Parrant No. 1 Holbrook, C NW NE Sec. 2-36n-3w. S.D. 160 ft.

Ramo Oil Co. No. 3 Govt., CWL NE NW Sec. 12-35n-3w. S.D. 1,563 ft.; Sunburst 1,545-63 ft.; 60 ft. O.I.H.; will D.D.

Huso Bros. No. 1 Elingson, C NE SW Sec. 14-35n-3w. Drlg. 1,240 ft.

Fulton Pet. Co. No. 3 Thompson, SE NE NW Sec. 28-35n-3w. Cmtd. 7-in. at 1,640 ft.

Pfabe & Engleking No. 3 Hurley, near C NW NE Sec. 8-34n-2w. T.D. 1,463 ft.; contact 1,455 ft.; wtr.; P.B. to 1,460 ft.

Superior Pet. Co. No. 8-A Govt., CEL NW NE Sec. 12-35n-3w. Drlg. 1,720 ft.

Fulton-Commonwealth No. 2 Thompson, SE NE SE Sec. 28-35n-3w. S.I. at 1,728 ft.

W. M. Cassidy No. 1 Phoenix, CNL NW NW Sec. 28-35n-4w. S.D. after D.D. into sat. Mad. L. at 2,325-58 ft.

Yellowstone County

Nelson Story-Hogan, Ltd., No. 1 Stallinberger, NE NE SW Sec. 18-3n-23e. T.D. 5,129 ft.; R.U. to res.; (formerly Signal O. & G. Co.).

Riverton Oil Co. No. 1 Fox, CEL NW NE Sec. 14-2n-23e. Res.; T.D. 1,975 ft.; U.R. 8¼-in. from 1,900 ft. to bttm.

UTAH

Box Elder County

Northern Oil Co. No. 1, C NE SW Sec. 17-13n-4w. Drlg. 125 ft.; prep. to run 20-in.

Grand County

Cane Creek Oil Co. No. 1 Govt., NW SW Sec. 31-26n-21e. T.D. 3,180 ft.; 6⅝-in. cmtd. 3,135 ft.; drlg. plug.

Summit County

Longwell Pet. Co. No. 1, SE SW SE Sec. 35-3n-5e. Res. at 2,876 ft.; drlg. 2,965 ft.

Texas and Louisiana Gulf

By NEIL WILLIAMS

New Field in Martha Area; Lovells Lake Has Extension

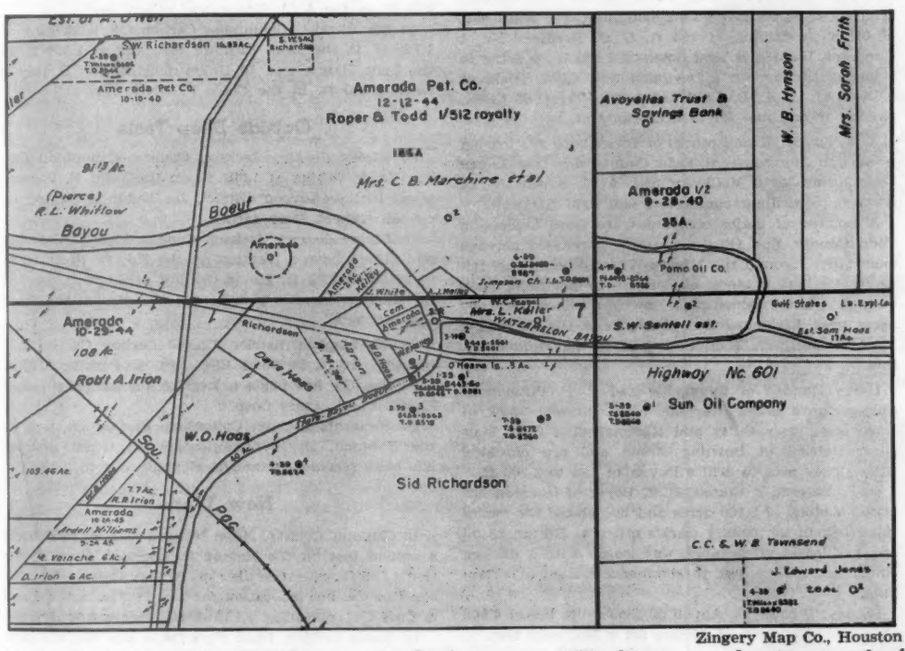
HOUSTON, Tex., July 10.—A new oil field for the Martha area, Liberty County, was definitely opened as Stanolind Oil & Gas Co. No. 1 Essye Mae Flowers flowed 150 bbl. of 41-gravity oil on a 15-hour gage. The test was made through a 5/32-in. choke with tubing pressure 1,400 lb. and shut-in casing pressure 1,540 lb. There was no showing of salt water. This well showed for a pool opener the previous week when it flowed 400 bbl. of fluid daily of which 70 per cent was oil and the balance salt water. The salt water was cemented off, and the well was completed through the same perforations at 8,104-08 ft.

The well is in the I.&G.N. Survey No. 7, on a geophysical prospect of several thousand acres. Production is from a comparatively thin sand section in the hour potential test the well flowed 167 bbl. of 39.7-gravity oil through a ⅛-in. choke under a tubing pressure of 1,200 lb.

Prospects of opening production from a deep sand flanking the northeast side of the South Houston field, Harris County, were encouraging as Commerce Oil Co. No. 1 Staiti, Callahan and Vince Survey, attempted to blow out after encountering high gas pressure at a total depth of 7,554 ft. The Round Marginulina was topped at 5,222 ft., Flat Marginulina at 5,344 ft. and the Warreni at 6,833 ft.

The north and northeast sides of the Friendswood field, Harris County, were defined as Humble Oil & Refining Co. abandoned two wells. On the north edge, No. 35-B Humble-West fee, L. Hemenway Survey, was is showing for a producer while cleaning out from new perforations at 7,850-60 ft. At the close of the week, the well was flowing 8 bbl. of 38.5-gravity oil per hour through a ¼-in. choke, under a tubing pressure of 1,200 lb. and casing pressure of 1,400 lb. This well was originally drilled to a total depth of 9,582 ft., and was shut down after a series of drill stem tests at 9,300 ft., 8,900 ft., and 8,600 ft., showed various amounts of gas, distillate and salt water.

In the Addicks area, Harris County, Housh and Thompson No. 1 Krey, B. Herra Survey, logged a sand with an oil and gas showing in a core at 7,247-57 ft., and is preparing to make a drill-stem test. The Textularia Hocklyensis was topped at 6,091-6,120 ft. and the first glauconite at 6,818 ft.



Zingery Map Co., Houston

Eola field, Avoyelles Parish, coastal Louisiana, a 1939 discovery, showing trend of development

Yeguaensis, indicating the well may be on the edge of the structure. Offset acreage is held to the north and east by Pan American Production Co. and Gulf Oil Corp. At the close of the week no new locations had been announced.

General Crude Oil Co. opened production from a third horizon on the southeast flank of the Esperson dome, Liberty County, with completion of No. 3-B Esperson. Sand showing oil and gas was cored at 7,592-7,635 ft. and the sand and shale showing oil and gas at 7,635-89 ft. Five and one-half inch casing was cemented on bottom at 7,694 ft., and the well was completed through perforated casing at 7,595-7,612 ft., for an initial production of 32 bbl. per hour, flowing through a ¼-in. choke under a tubing pressure of 1,160 lb. and casing pressure 1,240 lb. Flank production was opened on the dome several weeks ago.

Lovells Lake

Production in the Lovells Lake field, Jefferson County, was extended about ½ mile south as Humble Oil & Refining Co. completed No. 1-B Steinhagen. It was drilled to a total depth of 8,189 ft., and the completion was made after plugging back to 7,782 ft. On a 24-quit at 6,700 ft., while on the northeast side in the A. Whitlock Survey, No. 33-B Humble-West fee, was abandoned at a total depth of 6,900 ft.

Hamman Exploration Co. No. 1 Darrington State Prison Farm, located in the Juliff area, Brazoria County, is bottomed in a sidetracked hole at 8,866 ft., and the well is attempting to blow out. This well showed evidence of opening production several weeks ago as a series of production tests in the original hole showed various amounts of oil, and gas at 8,300 ft. and 8,800 ft.

Citrus Grove

On the Citrus Grove prospect, Matagorda County, Continental Oil Co. continues to test No. 1 Savage. The casing was reperforated at 3,642-52 ft., and the well blew dry gas. The casing was reperforated again at 2,940-45 ft., and it tested dry gas with a spray of salty drilling mud. The perforations have been squeezed off and the well is expected to be completed in the 4,100-ft. sand at which depth it tested 2,000,000 cu. ft. of dry gas.

In the same county, west of the town of Palacios, Sun Oil Co. No. 1 Cavallin, which was temporarily abandoned several weeks ago, has been reworked and

Louisiana Coast

Along the Louisiana Coast, interest was centered on two interesting Wilcox tests scheduled to be tested over the week end. In Evangeline Parish, on the Reddel prospect, Continental Oil Co. and others No. 1 Lillie Manuel, Section 33-4s-1w, has been plugged back from a total depth of 11,341 ft. to 10,145 ft., and a short string of liner has been cemented preparatory to testing several showings in the Sparta formation at intervals from 9,350-9,915 ft. No showings of oil or gas were logged in the Wilcox formation.

In the Merryville area, Beauregard Parish, Atlantic Refining Co. No. 1-A Rice Land & Lumber Co., Section 22-3s-11w, recovered salt water on a drill-stem test in the Wilcox formation at 8,282-97 ft., and the company is preparing to test again at 8,240-50 ft. Should this test fail, the hole will be plugged back to test the Sparta formation at 7,585-7,605 ft. which is reported to have carried a good showing of gas and distillate.

In the Eola field, Avoyelles Parish, Sid Richardson extended production approximately 1,250 ft. north with the completion of No. 1 Pearce Estate, Section 6-2s-3e. The hole is bottomed at 8,544 ft., and the well was completed through perforated casing at 8,421-8,528 ft., for an initial production of 238 bbl. daily, flowing through a ⅛-in. choke. Tubing pressure was 1,600 lb. and casing pressure 1,700 lb.

Interest is now centered on Amerada Petroleum Corp. No. 1 Robert Irion, ½ mile southeast of the above test, which topped the Wilcox at 8,337 ft., approximately 65 ft. higher than the Pearce producer which was the highest well in the field. The well is coring below 8,500 ft., and casing is expected to be cemented the first of the week. This well indicates that the main part of the structure lies to the northwest. Amerada Petroleum Corp. spudded No. 1 Stokes, about 1 mile north of the Pearce production in Section 41, while Sid Richardson has spudded No. 1 Sam Haas, ½ mile southwest of No. 1 Pearce.

Cheneyville

In the Cheneyville field, Rapides Parish, Gulf Oil Corp. No. 1 Myrtle Pope, southeast edge of the field, cored salt water in the Cockfield sand and the hole is being carried to the Wilcox formation. Locations were made by the company for No. 1 Bickerstaff and No. 1 C. U. Pope, both being located in Section 4-18s-2e.

On the China prospect, Jefferson Davis Parish, Union Sulphur Co. No. 1 H. B. Tietje, Section 36-7s-4w, perforated casing at 7,582-96 ft., and tested salt water and a small amount of oil. The perforations have been squeezed off and the well is testing through perforated casing at 7,549-57 ft.

On the Convent dome, St. James Parish, Continental Oil Co. No. 2 Realty Operators perforated casing at 8,045-66 ft., and the hole is being swabbed. The hole is bottomed in salt at 8,785 ft.

(Continued on Next Page)

TEXAS GULF COAST COMPLETIONS IN PROVEN FIELDS

Brazoria County

Hastings field: Stanolind Oil & Gas Co. No. 5 McDonald, perforated casing 6,060-78 ft., 608 bbl., ¼-in. choke.

Chambers County

Anahuac field: Humble Oil & Refining Co. No. 28 Johnston, 7,124 ft., 648 bbl., ¼-in. choke. South Cotton Lake field: Salt Dome Oil Corp. No. 2 V. A. Lawrence, perforated casing 6,465-85 ft., 51 bbl., ⅛-in. choke.

Fort Bend County

Boling field: Mackhank Petroleum Co. No. 14-C Farmer, 4,591 ft., 528 bbl., ¼-in. choke.

Galveston County

Dickinson field: Martex Petroleum Corp. No. 12 Stewart, sand 8,570-95 ft., 526 bbl., ¼-in. choke. Mid States Oil Co. No. 1 Deats-Holmes, sand 8,682-8,705 ft., 77 bbl., ⅛-in. choke. Hitchcock field: Maco Stewart No. 13 fee, sand 5,126-40 ft., 118 bbl., ⅛-in. choke. League City field: Phillips Petroleum Co. No. 4 Lobit, perforated casing 8,949-61 ft., 231 bbl., ⅛-in. choke.

Hardin County

Silsbee field: Humble Oil & Refining Co. No. 2 Theous, 6,944 ft., 528 bbl., ¼-in. choke.

Harris County

Aldine field: Earl Hankamer No. 1 Rowland, perforated casing 6,642-48 ft., 120 bbl., ⅛-in. choke. Clear Lake field: Humble Oil & Refining Co. No. 9-C Humble-West, 5,910 ft., 84 bbl., ⅛-in. choke. Clinton field: Stanolind Oil & Gas Co. No. 2 Candelari, perforated casing 3,772-87 ft., gas well. Fairbanks field: Amerada Petroleum Corp.-Stanolind Oil & Gas Co. No. 7 Foley, perforated casing 6,833-37 ft., 163 bbl., ⅛-in. choke. Friendswood field: Humble Oil & Refining Co. No. 33 Humble-West, 6,900 ft., abandoned. Humble Oil & Refining Co. No. 35 Humble-West, 6,700 ft., abandoned. Humble Oil & Refining Co. No. 12 West Production Co., sand 5,690 ft., 563 bbl., ⅛-in. choke. Pierce Junction field: Hamill and Smith No. 3 Bender, sand 4,236-50 ft., 436 bbl., 15/64-in. choke. South Houston field: Stanolind Oil & Gas Co. Drilling District No. 27, 4,775 ft., 362 bbl., ¼-in. choke.

Jefferson County

Lovells Lake field: Humble Oil & Refining Co. No. 1-B Steinhagen, 7,782 ft., 167 bbl., ⅛-in. choke.

Liberty County

Hardin field: Humble Oil & Refining Co. No. 2 Partlow, 7,660 ft., gas well. Texas Co. No. 3 Humphrey, sand 7,628-45 ft., 122 bbl., ⅛-in. choke. Esperson field: General Crude Oil Co. No. 3-B Esperson, perforated casing 7,595-7,612 ft., 808 bbl., ¼-in. choke.

Polk County

Segno field: Gulf Oil Corp. No. 17 Wing, sand 8,060-69 ft., 622 bbl., ¼-in. choke.

Wharton County

Withers field: McDannald Oil Co. No. 1 McCracken-Broussard, 5,547 ft., 132 bbl., ⅛-in. choke. Texas Co. No. 32-B Pierce Estate, 5,547 ft., 103 bbl., 9/64-in. choke. Texas Co. No. 33-B Pierce Estate, sand 5,507-42 ft., 65 bbl., 6/64-in. choke.

Western Kentucky

(Continued from Page 74)

ner & Sons No. 2 E. T. Pate, location. Lincoln Petroleum Co. No. 2 Lee Campbell, drilling at 320 ft. Glen Dean district: Stewart Petroleum Co. No. 2 Virgil Robertson, drilling at 125 ft.

Daviess County, Birk City district: Kentucky-Missouri Oil Co. No. 2 Rebecca Boswell, dry hole at 1,310 ft., abandoned. Arrows Drilling Co. No. 2 Dr. W. L. Tyler, spudding. Utica district: Farmer and Chenault No. 1 I. J. Clark, rigging up. E. Dehart and others No. 1 Mary B. Murphy, location. W. Chenault and Farmer No. 3 G. A. Nation, 50-bbl. well in Barlow sand, total depth 1,350 ft. One mile east of Rockport, Ind.: Mecca Oil Co. No. 1 Tilden Ellis, location. Thurston district: Larow and Harris No. 1 Joe Heady, location. Glenville district: A. Teller, trustee, No. 1 E. F. Lebold, rigging up.

Hancock County, Patesville district: Roy Beard and others No. 1 Jess Burnett, completed in Bethel sand, no details. Mecca Oil Co. No. 2 Ada Harris, drilling at 925 ft. Indian Hill district: Ryan, Labree and Brown No. 1 J. L. Daniels, location. Victoria district: J. B. Reynolds No. 1 McCauley, dry hole at 640 ft. Lyonia district: H. Apell and others No. 1 Lou Richards, dry hole at 634 ft. Lyons district: O. D. Vickers No. 2 Cicero Smith, dry hole at 400 ft.

McLean County, Livermore district: J. D. Reynolds and others No. 6 Hollis Howell, rigging up. Major Oil Co. No. 1 G. C. Rowan, reopened from Barlow sand and now drilling to McClosky.

Muhlenberg County, Penrod district: Joe Bloylock No. 1 C. DeArmond, 10-bbl. well in Jackson sand, total depth 416 ft.

Ohio County, Heflin district: J. C. Ellis and Antone No. 2 L. E. Charlet, 50 acres, dry hole at 1,530 ft. Thomas Galey and Mike Callas No. 3 Mrs. R. A. Nance, location. Adaburg district: Leeper Oil Co. No. 8 E. Ford, location. Buford district: A. Teller, trustee No. 3 Arthur Holland, 5-bbl. well in Barlow sand, total depth 1,027½ ft. Oklahoma district: White and Vickers No. 2 George Howard, dry hole at 640 ft. Taffy district: Ohio Oil Co. No. 25 J. M. Kirk, pressure well made from a dry hole, total depth 640 ft. Ohio Oil Co. No. 26 J. M. Kirk, rigging up. Westerfield district: O. D. Vickers No. 2 Sapp Heirs, gas well, total depth 620 ft. Cromwell district: Fisher Oil Co. No. 1 Warren Taylor Heirs, dry hole, total depth 1,714 ft. Fordsville district: A. J. Stewart and others No. 3 West tract, Mary Ann White, dry hole. A. J. Stewart and others No. 4 West tract, Mary Ann White, dry hole.

A report received from Todd County says Massey, Whatley & Appel No. 1 Cell Slaughter, 2½ miles east of Clifty, is drilling at 185 ft. L. O. Bradford No. 1 Randolph Hadden is shut down at 1,375 ft., moving in a heavy machine for a Devonian test. C. W. Hicks of Elkton No. 1 R. L. Sullivan, 1 mile west of Clifty, moving in machine for a McClosky test.

A. V. Smith III and others of Owensboro are leasing a block in northeastern Todd County near the Logan County line for a McClosky test. A. V. Smith, Jr., of Owensboro, drilling contractor, will drill the well.

A number of major companies are lease holders in Todd County. Sun Oil Co. recently purchased acreage near Clifty, around the Massey-Whatley well. Gulf Refining Co. has a block of acreage in northern Todd County. Ohio Producing Co. owns a block of 6,000 acres near Kirkmansville. South Penn Oil Co. has a block in northern Todd County near the Muhlenberg line.

Harry Randall of Evansville and P. F. Putnam of Chicago have taken over the W. L. Russell block of 4,000 acres near Clifty and Kirkmansville from Margaret Hobson of Bowling Green and are checking titles. They plan to drill a Devonian test to 2,200 ft.

One mile east of Elkton, E. E. Beyer of Houston has leased a block of 5,100 acres and has placed for record this week in the county clerk's office at Elkton 28 oil and gas leases. This block was leased with a drilling obligation, a deep test to commence within a certain time.

Massey, Whatley & Appell of Evansville leased 4,500 acres near the town of Allegre for a McClosky test.

EASTERN KENTUCKY

ASHLAND, Ky., July 10.—Drilling operations continued at a low point in eastern Kentucky this week with two small oil wells completed in Lee County.

Thomas Wittner No. 1 on the C. B. Tipton land on Billie's Fork is a 2-bbl. well. W. M. Wireman, trustee, completed No. 10 on the E. S. Moore, 60 acres of land on Little Sinking, also a 2-bbl. well.

In the Big Sinking district of Lee County, Rush Cable is down 600 ft. in No. 7 E. S. Moore No. 1, land on Little Sinking.

In Knott County, Inland Gas Corp. was drilling at 708 ft., in sand, in No. 209, Joseph Pigman land, on Troublesome Creek, and was down 1,900 ft., in Big lime, in No. 210, on the H. H. Pigman land, on the Right Fork of Troublesome Creek. The same firm made a location for No. 211, W. R. Smith land, on Cave Branch of Right Fork of Troublesome Creek.

Kentucky West Virginia Gas Co. was drilling at 1,405 ft., in Salt sand, in No. 580, H. H. Smith land, on Caney Creek, and is rigging up No. 411, Richard Hall land, at the head of Right Beaver Creek.

In Floyd County, Kentucky West Virginia Gas Co. was drilling below 760 ft., Salt sand, in No. 5253, George McKinney land, on Deadening Fork of Toler Creek, and is drilling at 890 ft., in slate, in No. 5254, Willard Hamilton land, on Branham Creek, branch of Mud Creek. The same firm has reached 1,880 ft., in slate and shells, in No. 542, Jacob Damron land, on Ivy Creek.

In Martin County, the Kentucky West Virginia Gas Co. is pulling 6⅝-in. casing from No. 5256 L. T. Mills, on Ramey Branch of Rockhouse Fork, preparatory to bailing.

Eastern Fields

(Continued from Page 88)

farm. Columbian Carbon Co. will drill on the R. C. Tignor and Alfred Griffith consolidation, elevation 865 ft., and on the H. H. Parsons, elevation 850.7 ft. In Elk district, this company has a location on the S. E. Tignor and W. A. Jordan farm, elevation 961.2 ft. In Union district, M. C. Sellen will drill on the Superior Realty Co., elevation 595 ft., and on the A. W. Brendel, elevation 601 ft.

In Poca district, Meigs Development Co. topped the Corniferous lime at 4,805 ft. on the E. P. Higginbotham farm. Brawley Reid Gas Co. is drilling at 2,150 ft. in the A. L. Cambell test; Godfrey L. Cabot, Inc., at 2,230 ft. in No. 2 Putnam Co., and at 2,429 ft. in No. 2 J. L. McLean; Mullins Gas Co. at 3,510 ft. in the Johnson-Carney test; United Carbon Co. at 4,200 ft. in the D. D. Slater and others test; Columbian Carbon Co. at 1,920 ft. in the Celeste Parcell test, and at 1,220 ft. in the A. H. Cambell test.

United Fuel Gas Co. is drilling at 2,162 ft. in the B. C. Gillespie test; at 292 ft. in the E. U. Dawson test; at 380 ft. in the W. J. Glass and C. T. Tolley test; at 518 ft. in the A. A. Beane and others test.

In Elk district, Columbian Carbon Co. is drilling at 1,739 ft. in the Mose Pushkin test, and at 1,090 ft. in the Lelia Hanna test. In Union district, Guy B. Ray is down 1,600 ft. in the Chloe F. Given test.

Outside Deep Tests

In Ripley district, Jackson County, Columbian Carbon Co. is fishing at 1,001 ft. on the John F. Parsons farm. In Ravenswood district, Joe Rubin is rigging up on the Gilbert Starr farm.

In Ripley district, Jackson County, Everett Starcher and others have a location on the Roy O. Pfest farm, elevation 812.33 ft. He is drilling at 4,620 ft. on the D. M. Boggess farm, and at 1,435 ft. on the Rosa Boggess farm.

In Washington district, United Carbon Co. is drilling at 4,870 ft. in No. 4 Elizabeth W. Perkins. United Fuel Gas Co. has made a location on the Darah Jane Lanham and others farm.

In Pleasants County, Columbian Carbon Co. test on the Hammat, Ervin consolidation, in Grant district, has been recemented and is cleaning out to 5,300 ft.

New Work

In Calhoun County, Hope Natural Gas Co. will drill a second test on the Roscoe F. Lockney farm, elevation 1,129 ft., Sherman district. In Clay County, Thompson Gas Co. has a location for No. 17 Thompson Land & Coal Co., elevation 1,132.81 ft., Pleasant district.

In Boone County, Pond Fork Oil & Gas Co. will drill No. 14 fee in Crook district, elevation 815.32 ft. In Calhoun County, McCall Drilling Co. has a location for No. 3 R. W. Bennett in Sherman district, elevation 966 ft. In Washington district, Four Way Oil Co. will drill on the L. C. Harrison farm, elevation 1,111 ft.

In Pleasants County, B. C. Deem, Jr., has a location for a second test on the D. P. Carder farm, Jefferson district, elevation 1,184.2 ft. In Union district, James B. Fell and others will drill No. 2 Ralph Williamson Heirs, elevation 638 ft.

In Ritchie County, J. A. McLane has a location on the J. P. Sandy heirs farm in Grant district on Big Run. Pittsburgh and West Virginia Gas Co. has a location for No. 6113 on the E. D. Maxson farm, in Union district, elevation 1,046.5 ft. T. F. Moats and G. C. Barker will drill on the W. S. and Mary Fowler farm, elevation 944 ft. In Murphy district, L. E. and W. H. Mossor have a location for No. 2 Beulah Pearl Adams, elevation 814 ft.

In Roane County, Curtis Oil & Gas Co. has a location on the J. W. Miller heirs, Curtis district, elevation 822.25 ft. In Harper district, L. L. Reed and others have a location on M. C. Bradley (surface) L. L. Reed and others (mineral), elevation 920 ft. Here, Harmony Gas Co. has a location for the W. P. Harper test, elevation 934.63 ft. In Curtis district, Rodgers Properties Co. will drill No. 5 McIntosh and Norman, elevation 999.41 ft.

Canadian Fields

Completions and Operations in Northwest and in Ontario

By VICTOR LAURISTON

CHATHAM, Ont., July 8.—Crude and naphtha production from all Canadian fields in April increased to 558,779 bbl. from a March figure of 384,461 bbl. April 1938 production was 464,316 bbl. For the first 4 months of 1939 the output was 1,831,022 bbl. against 1,815,685 bbl. in the same period of 1938.

Figures of Alberta production in May, just issued, show a further increase to 690,066 bbl. compared with 543,489 bbl. in April. Crude production from Turner Valley limestone wells increased from 514,823 to 658,941 bbl. Naphtha production increased from 26,012 to 27,126 bbl., and shallow crude from 759 to 765 bbl. Red Coulee light crude was up from 1,061 bbl. in April to 1,132 bbl. in May and Wainwright heavy crude increased from 686 to 779 bbl. Lloydminster heavy crude, with a production of 178 bbl. in April, showed no deliveries in May; but 891 bbl. were recorded from the Moose dome and initial production of 432 bbl. from the Anglo-Canadian wells in the Steveville field.

Of the Turner Valley production, separator recoveries from gas wells totaled only 3,652 bbl., while natural gasoline from absorption plants included: British-American, 5,912 bbl.; Gas & Oil Products, 4,599 bbl.; Royalite No. 1 plant, 5,273 bbl.; Royalite No. 2 plant, 5,690 bbl. This is the first time absorption plant gasoline has been reported separately.

Among Turner Valley crude producers, Royalite No. 38 delivered 20,576 bbl. and Home Oil Co. No. 2 Millarville, in North Turner Valley, produced 20,130 bbl. Other major producers were: Royal Canadian No. 2, 19,052 bbl.; Vulcan-Brown No. 1, 18,780 bbl.; Royalite No. 36, 17,210 bbl.; Extension Royalties No. 1, 16,785 bbl.; Sundance Royalties No. 1, 16,307 bbl. Royalite and Sterling Pacific wells delivered 149,017 bbl. of crude; Anglo-Canadian and associated companies 128,565 bbl. and Brown Oil Corp. and associates 98,915 bbl. Deliveries by independent companies totaled 282,444 bbl.

Turner Valley Completions

In Section 32-18-2w5, on the Turner Valley west flank, Oil Ventures No. 1, LSD 14, finished at 7,807 ft., developed open flow of 769 bbl. a day through 1-in. choke. British Colonial Oils No. 1, LSD 5, same section, finished at 8,364 ft., has been acidized and is testing for allowable. George Harris and associates No. 2, LSD 15, same section, finished at 7,565 ft., flowed 60 bbl. an hour through both casing and tubing, and is testing for allowable.

In the southwest extension, Harris No. 1, LSD 13, Section 9-18-2w5, bottoming at 7,454 ft., has been operating on allowable of 225 bbl. a day. It may be gun-perforated in the tight upper zone.

In Section 16-18-2w5, Okalta Oil Co. No. 8, LSD 6, finished at 7,102 ft., has been operating under temporary allowable of 225 bbl. a day. Liner has been run to the bottom of the producing zones and cemented, and the bottom porous zone perforated with 40 to 50 shots, with a smaller number in the gas-producing upper zone. The process, tried for the first time in Turner Valley, is expected to give the operators complete control of the gas-oil ratio, in addition to increasing crude production.

Tests in the Lime

In Section 5-19-2w5, West Central Turner Valley, Calwin Royalties No. 1, LSD 15, is deepening after getting the Madison limestone at 6,735 ft. and cementing casing at 6,744 ft. Winalta Royalties No. 1, LSD 1, which got the Madison at 6,797 ft., is below 6,868 ft. after cementing at 6,811 ft.

In Section 17-18-2w5, Anglo-Canadian Oil Co. No. 4, LSD 6, is standing cemented at 7,865 ft., 10 ft. in the Madison, and waiting for drill pipe.

West of the main field, Anglo-Canadian Oil Co. No. 5, LSD 8, Section 31-18-2w5, is below 8,504 ft. after a drill-pipe test of the upper porous zone of the Madison lime, which was contacted at 8,177 ft. The upper zone showed around 65 bbl. in 24 hours.

Farther south, Scottish Petroleums No. 1, LSD 16, Section 19-18-2w5, got the Madison limestone at 8,530 ft. and is standing cemented. Test is expected to get the main producing horizon around 9,000 ft., lower than any Turner Valley producer, but 1,000 ft. higher than Okalta Oil Co. No. 6, which encountered salt water with the crude in the lower porous zone. When the lime was reached, Scottish No. 1 had 7,640 ft. of open hole protected by high-pressure mudding off.

West Central Area

In Section 25-19-3w5, West Central Turner Valley, Argus Royalties No. 1, LSD 14, is in the upper Benton formation below 3,868 ft.

In Section 7-19-2w5, Anglo-Canadian No. 8, LSD 11, is in the Belly River formation below 2,568 ft.

In Section 5-19-2w5, Royalite Oil Co. No. 40, LSD 4, is in the Blairmore formation below 7,105 ft.

West Side Drilling

In Section 32-18-2w5, Royalite No. 42, LSD 4, is in the upper Benton formation below 4,564 ft.

In Section 29-18-2w5, Royal Canadian Oil Co. No. 3, LSD 12, is in the lower Benton formation below 6,125 ft. Command Oils No. 2, LSD 11, is rigging. Royalite No. 39, LSD 3, is below 7,329 ft. after getting the Home sand at 7,101 ft., and is getting close to the lime.

In Section 17-18-2w5, Extension Royalties No. 2, LSD 11, is in the Blairmore formation below 7,120 ft. Anglo-Canadian No. 6, LSD 3, is in the Blairmore below 7,093 ft. Royalite Oil Co. No. 41, LSD 1, is below 6,247 ft.

In the far south, Theo Grewer No. 1, LSD 14, Section 5-18-2w5, is below 1,118 ft. Brown Oil Corp. No. 6, LSD 15, same

(Continued on Page 105)

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California Oil Field Operations For May, 1939

According to figures collected by the American Petroleum Institute, the total production of crude oil in California for May amounted to 19,073,972 bbl., an average of 615,289 bbl. per day. This is an increase of 1,827 bbl. per day over April production.

Total stocks of crude and all products in Pacific Coast territory decreased during the month 745,470 bbl. The total stocks at the end of the month were 161,351,224 bbl. The total stock increase for 1939, up to May 31, was 3,666,935 bbl.

CRUDE PETROLEUM PRODUCTION

(Figures of production and stocks are in barrels of 42 gal.)

	Total production May	Daily average May 1939	Daily average Apr. 1939	Daily average May 1938
Group 1:				
Arvin	20,857	673	456	.....
Belridge—North	363,032	11,711	11,554	12,264
Belridge—South	34,564	1,115	1,112	1,040
Canal	143,185	4,619	4,261	1,830
Canfield ranch	586	19	35	126
Coalinga	370,004	11,936	11,142	10,024
Cole's Levee	12,601	406	292	.....
Edison	74,072	2,389	2,306	2,891
Elk Hills	305,724	9,862	9,892	10,811
Fruitvale	203,025	6,549	6,776	9,254
Greeley	61,197	1,974	1,621	3,473
Kern River	326,433	10,530	11,149	12,766
Kettleman Middle Dome	974	31	34	54
Kettleman North Dome	1,647,345	53,140	53,057	71,566
Lost Hills	96,808	3,123	3,305	3,656
McKittrick	113,399	3,658	2,940	3,300
Midway-Sunset	1,646,753	53,121	52,956	63,322
Mountain View	252,977	8,161	8,428	12,085
Mount Poso	380,892	12,287	13,123	19,240
Rio Bravo	238,842	7,705	8,398	3,250
Round Mountain	329,847	10,640	10,930	15,738
Ten Section	276,778	8,928	8,652	5,948
Tupman	15,517	501	519	.....
Wasco	37,953	1,224	719	666
Wheeler Ridge	10,160	328	321	308
Group 2:				
Capitan	75,219	2,426	2,484	2,857
Elwood	131,997	4,258	4,257	6,757
Rincon	109,130	3,520	2,915	4,471
San Miguelito	78,285	2,525	2,413	2,768
Santa Barbara	9,290	300	280	454
Santa Maria	499,595	16,116	18,577	13,997
Summerland	1,289	42	31	35
Ventura Avenue	1,088,602	35,116	33,194	36,224
Ventura-Newhall	178,463	5,757	5,940	4,983
Watsonville	930	30	30	40
Group 3:				
Brea-Olinda	169,429	5,465	5,565	5,722
Coyote—East	69,201	2,232	2,241	3,552
Coyote—West	232,829	7,511	7,712	8,894
Dominguez	665,158	21,457	21,143	27,102
El Segundo	102,090	3,293	3,302	11,026
Huntington Beach	921,922	29,739	29,167	33,154
Inglewood	365,520	11,791	11,697	14,840
Lawndale	1,897	61	67	93
Long Beach	1,497,634	48,311	48,559	58,067
Los Angeles-Salt Lake	15,692	506	493	524
Montebello	542,412	17,497	15,496	10,676
Playa Del Rey	153,113	4,939	5,201	6,711
Potrero	32,941	1,063	954	453
Richfield	266,712	8,604	8,552	9,106
Rosecrans	397,338	12,817	13,533	6,810
Santa Fe Springs	850,160	27,425	27,791	36,246
Seal Beach	227,478	7,338	7,356	8,813
Torrance	608,155	19,618	21,721	11,746
Whittier	31,487	1,016	970	929
Wilmington	2,786,479	89,886	87,838	97,949
Total May	19,073,972	615,289	613,462	688,611
Total April	18,403,853	613,462	.....	.....
Increase	670,119	1,827		

OIL FIELD DEVELOPMENT

	New rigs up	Active drilling	Producers completed	Daily initial output	Active producing	Abd. wells Drillers	Abd. wells Producers
Group 1:							
Arvin	5	2	2	5,432	4	..	..
Belridge—North	..	4	1	424	66	..	..
Belridge—South	..	..	..	.....	86	..	..
Canal	..	2	1	1,875	22	..	..
Canfield Ranch	..	..	..	.....	1	..	..
Coalinga	10	12	6	20,814	819	3	1
Cole's Levee	..	4	1	260	3	..	..
Edison	..	..	..	.....	88	..	..
Elk Hills	..	1	..	.....	168	..	1
Fruitvale	..	2	1	109	173	..	..
Greeley	..	4	3	13,804	17	..	..
Kern River	2	4	1	5	1,390	2	..
Kettleman Middle Dome	..	..	..	.....	3	..	..
Kettleman North Dome	3	13	5	9,930	227	..	..
Lost Hills	..	..	..	.....	245	..	..
McKittrick	..	1	..	.....	191	..	..
Midway-Sunset	1	4	1	35	2,329	..	3
Mountain View	..	..	..	.....	177	..	..
Mount Poso	1	1	2	525	280	2	1
Rio Bravo	4	3	1	3,027	29	..	..
Round Mountain	..	1	1	25	205	..	..
Ten Section	1	1	..	.....	31	..	..
Tupman	..	1	..	.....	2	..	..
Wasco	..	1	1	7,500	6	..	..
Wheeler Ridge	..	..	..	.....	33	..	..
Group 2:							
Capitan	..	..	..	.....	45	..	..
Elwood	..	..	..	.....	81	..	..
Rincon	1	1	..	.....	54	..	..
San Miguelito	..	2	..	.....	20	..	..
Santa Barbara	..	..	..	.....	25	..	2
Santa Maria	1	3	..	.....	299	..	..
Summerland	..	1	..	.....	19	..	..
Ventura Avenue	3	3	2	4,325	253	..	..
Ventura-Newhall	..	10	2	400	550	..	..
Watsonville	..	..	..	.....	7	..	..
Group 3:							
Brea-Olinda	..	..	..	.....	354	..	1
Coyote—East	..	..	1	300	78	..	..
Coyote—West	1	1	1	228	47	..	..
Dominguez	..	1	3	1,491	187	1	..
El Segundo	..	..	..	.....	50	..	..
Huntington Beach	1	3	2	480	543	..	6
Inglewood	..	..	..	480	209	..	..
Lawndale	..	..	..	.....	6	1	1
Long Beach	1	1	..	.....	1,228	..	2
Los Angeles-Salt Lake	..	..	..	.....	112	..	..
Montebello	13	14	3	2,534	233	..	1
Playa Del Rey	..	1	..	.....	178	..	..
Potrero	..	..	..	.....	15	..	..

Richfield	1	..	..	.....	297	..	1
Rosecrans	2	6	2	457	130	..	1
Santa Fe Springs	..	..	..	.....	574	..	2
Seal Beach	..	..	..	.....	101	1	..
Torrance	1	4	4	592	720	..	..
Whittier	..	..	..	.....	143	..	..
Wilmington	13	19	15	7,872	641	..	..
Miscellaneous drilling	4	28	..	.....	.....	9	..
Group 4—gas fields:							
Buena Vista Lake	..	..	..	.....	1	..	..
Buttonwillow	..	..	..	.....	.....	..	..
Chowchilla	..	..	..	.....	.....	..	..
Delano	1	1	..	.....	4	..	..
Dudley Ridge	..	..	..	.....	.....	..	..
Goleta	..	1	..	.....	.....	..	..
Marysville Buttes	..	1	..	.....	2	..	..
McDonald Island	..	..	..	.....	4	..	..
Rio Vista	..	..	..	.....	23	..	..
Semi-Tropic	..	..	..	.....	.....	..	..
Tracy	..	..	..	.....	.....	..	..
Total May	70	168	60	82,444	13,928	19	23
Total April	91	177	78	71,963	13,897	45	22
Decrease (*increase)	21	9	18	*10,481	*31	26	*1

STOCKS HELD IN PACIFIC COAST TERRITORY BY CALIFORNIA OIL COMPANIES

	May 31, 1939	Apr. 30, 1939	May changes	Dec. 31, 1938 (reclassified)
1 Gasoline-bearing crude	39,830,694	39,530,900	+299,794	36,225,312
2 Nongasoline-bearing crude	14,442,707	15,195,794	—753,087	16,282,177
3 Unblended natural gasoline	2,423,266	2,201,339	+221,927	2,699,455
4 Gasoline (not including distributing and service stations)	15,044,669	15,400,469	—355,800	13,259,369
5 Naphtha distillates	*1,339,712	*1,407,569	—67,857	*1,566,349
6 Gas oil and Diesel oil	10,244,405	10,826,518	—582,113	10,539,937
7 Fuel oil residuum	71,091,951	70,877,903	+214,048	70,957,881
8 All other stocks	†6,933,820	†6,656,202	+277,618	†6,153,809
Total	161,351,224	162,096,694	—745,470	157,684,289
*Estimated amount of unfinished gasoline contained in item No. 5	1,159,101	1,210,404		1,350,379
†Coke included in item No. 8	253,939	222,379		92,066

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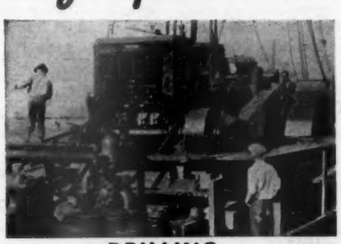
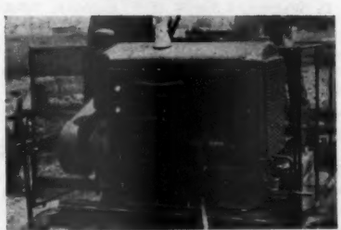


DRILLING



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Canadian Fields

(Continued from Page 103)

section, is in the Belly River formation below 2,349 ft. with 10¾-in. casing set at 1,985 ft.

North Turner Valley

In North Turner Valley, Royalite Oil Co. No. 43, LSD 2, Section 22-20-3w5, is below 3,265 ft. after getting the cardium sandstone marker at 2,920 ft.

Home Oil Co. No. 3 Millarville, LSD 1, Section 33-20-3w5, is waiting for rotary outfit from Anglo-Canadian Oil Co. Home No. 4, LSD 9, Section 28-20-3w5, a mile south and west of No. 2 producer, is spudding.

In the Waite Valley area, National Petroleum Corp. No. 3, LSD 4, Section 25-20-4w5, has set 13⅜-in. casing at 1,775 ft. and is waiting for rotary outfit. Vulcan Oils, Ltd., is contributing $25,000 toward the cost of drilling, in return for a proportionate interest in the well and holdings of 10,000 acres.

New Tests Planned

In the southwest Turner Valley area, Royalite Oil Co. No. 44 is working on cellar in LSD 9, Section 8-18-2w5. The location is a south offset to Royalite No. 38, LSD 16, one of the largest producers in the field.

In North Turner Valley, Anglo-Canadian Oil Co. is arranging for two tests on acreage of Phillips Petroleum, Ltd., of Calgary. Locations will likely be south and west of the present North Turner Valley producers, and tests will spud before the end of August.

A. H. Mayland and associates of Calgary are arranging for a test in the west-central area, east of Vulcan-Brown No. 1 producer.

Turner Valley Production

Tests of Turner Valley crude production at the end of June showed for 75 wells a potential of 60,357 bbl. through 1-in. choke; compared with 47,035 bbl. through 2-in. choke in September 1938 tests. The gas-oil ratio has decreased from 4,400 ft. in September 1938 to 2,780 ft. in June 1939. Gas taken from the structure has been reduced to 60,000,000 cu. ft. a day against about 200,000,000 cu. ft. a year ago.

Tests in the Foothills

In the Pouce Coupe dsitrict, west of Peace River, Benedum & Trees are preparing to resume drilling of Guardian Oil Co. No. 1, Section 7-80-12w6, from 2,460 ft. Elanta Oils, Ltd., has taken over 10,000 acres from E. R. Lovewell and R. S. Thayer for development on a stock and royalty basis. This acreage is in Township 78-13w6, south of the Benedum & Trees block, and production is expected around 900 ft. from a 50-ft. sand in the upper St. John shales.

On the Brazeau structure west of Edmonton, Home Oil Co. No. 1, LSD 16, Section 7-43-17w5, is resuming from 5,950 ft. after running 8-in casing.

On the Clearwater structure, Altoba No. 1, Section 31-34-9w5, is at 2,500 ft. waiting for a test of showings which indicate a possible wet gas producer.

On the Ram River structure, Ram River Oils No. 1 Township 38-12w5, is below 1,280 ft.

On the Grease Creek structure, Grease Creek-Northwest Co. No. 1, LSD 2, Section 13-29-7w5, is shut down at 3,700 ft. owing to bad road conditions.

On the Jumping Pound structure west of Calgary, Rabson Oil Co. No. 1, LSD 3, Section 36-24-5w5, is below 2,049 ft. with 13⅜-in. casing set at 733 ft.

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leums No. 1, Section 8-24-7w5, is running casing preparatory to resuming from 3,932 ft. The test, inactive since last year, got the Devonian limestone at 3,105 ft., and has encountered some small gas shows.

On the Savannah Creek structure in the southern foothills, Anglo-Canadian Oil Co. No. 1, SW¼ Section 20-14-4w5, with diamond drill hole carried to 511 ft., has installed cable tools and is redrilling below 145 ft. after cementing 16-in. surface pipe.

Border Fields

On the Del Bonita structure, south of Lethbridge, Terminal Oil Co. No. 1, NE¼ Section 18-1-21w4, is reported making around 150 bbl. a day, most of the production being sold to farmers. Trans-Alberta Oils, Ltd., has made tentative location for a deep test on the same structure about 4,000 ft. east of Terminal No. 1. Rotary outfit will be used, and test will likely spud this summer.

E. L. Cord of Los Angeles has signed agreement with Terminal Oil Co. for a test on the Malmberg lease, NE¼ Section 35-3-23w4, in the Spring Coulee area. Drilling will probably start this summer. E. L. Cord and Sound Cities Gas & Oil Co. of Washington each hold a checkerboarded half of N½ Township 3-23w4, with W. H. McIntyre, president of Utah Oil & Refining Co., holding the south half. Adjacent acreage on the Spring Coulee structure is largely held by Wheatman Petroleum, Ltd., of Chicago, and Del Bonita Petroleum.

West of Lethbridge, Lethbridge Petroleum & Refining Co. No. 1, LSD 12, Section 11-8-22w4, is arranging to resume from 2,915 ft.

In the Taber area, Border Petroleums No. 1, LSD 5, Section 32-19-17w4, is fishing at 3,465 ft. North Taber Royalties No. 1, LSD 7, Section 10-11-15w4, is ready to resume from 3,070 ft.

A Vancouver syndicate has spotted a new test in Section 28-9-17w4, 3½ miles west of Taber and 2 miles west of the Plains Petroleum wells.

On the Blood Reserve area, West Petroleums, Ltd., of Toronto is completing a seismic survey and will likely start a commercial test later in the year.

Steveville Operations

In the Steveville field, east of Calgary, Anaconda Oil Co. No. 1, LSD 15, Section 9-22-12w4, is below 2,665 ft., carrying 8-in. casing. Anglo-Canadian Oil Co. No. 2, LSD 4, Section 14-20-11w4, bottoming at 3,262 ft., and Anglo-Canadian No. 1, LSD 2, Section 31-21-12w4, bottoming at 3,178 ft., has been cemented and will gun-perforate the casing in both the Bow Island and Colorado sands, where cores revealed fair saturation. Anglo-Canadian No. 3 in the same general area is waiting for road improvement to move equipment.

Lloydminster Field

In the Alberta end of the Lloydminster field, Shaw Petroleums No. 1, LSD 3, Section 26-49-1w4, at 1,400 ft. encountered a gas flow of 250,000 ft. a day with 360 lb. pressure. The log indicates a thickening of the sands toward the southwest. The flow was shut off and the hole deepened, a second sand being encountered at 1,735 ft. with between 8,000,000 and 10,000,000 cu. ft. a day and 700 lb. pressure. The flow is being shut in. Production will be taken by Walter F. Thorn and associates of Franco Oils, Ltd., which assisted in the drilling, and is planning to pipe gas from the Lloydminster field to Saskatoon.

Ontario Drilling

In the Dover field, Kent County, E. P. Rowe No. 5 Bruette, W½ Lot 5, Front Concession, Raleigh Township, finished in the Trenton limestone at 3,290 ft., with a natural flow around 100 bbl. a day flush. It was shut in and blown twice a day, making 60 bbl.

In the old Tilbury field, Kent County, Union Gas Co. No. 311, Lot 11, Concession 14, Tilbury East Township, finished at 1,447 ft. with 10 bbl. of oil and around 50,000 ft. of gas. It is being acidized.

Farther north, in the Tilbury town area, Union Gas Co. No. 2, Lot 8, Concession 7, Tilbury East Township, is starting.

In the south end of the Dawn field, Union Gas Co. No. 100, Lot 10, Concession 7, Camden Gore, finished a dry hole at 1,835 ft. Union No. 101 is starting in SE cor. Lot 11, Concession 6, Dawn Township, just north of the Lambton-Kent county line.

In the Chatham field, Kent County, Union Gas Co. No. 18, Lot 4, Concession 2, Camden Gore, finished a dry hole at 1,866 ft. Union No. 19 Chatham, Lot 13, Concession 11, Chatham Township, is below 825 ft.

In the Malahide field, Elgin County, Union Gas Co. No. 8, Lot 20, Concession 5, Malahide Township, finished at 1,072 ft. with a natural production of 449,000 cu. ft. a day, which was increased by a shot. Union No. 9, Lot 19, Concession 5, finished around 1,080 ft. with 239,000 ft. a day, and was not shot. Union No. 10, Lot 9, Concession 5, is below 1,063 ft. Union No. 11, Lot 17, Concession 5, is below 620 ft. Union No. 12, Lot 22, Concession 5, is below 766 ft. Union No. 13 is starting in Lot 18, Concession 3, somewhat south of the main field.

In the Delaware area, Union No. 2 Delaware, Lot 5, Concession 3, Southwold Township, is below 1,030 ft.

In the Haldimand field, Union Gas Co. No. 228, Lot 8, Concession 14, Walpole Township, finished a dry hole at 812 ft. Union No. 229, Lot 23, Concession 4, Woodhouse Township, finished dry at 995 ft. Union No. 230, Lot 8, Concession 14, Walpole Township, finished at 834 ft. with 50,000 ft. a day. Union No. 231, Lot 2, Concession 2, Rainham Township, got 90,000 ft. a day in the Red Medina and is deepening below 880 ft. Union No. 232 is starting in Lot 22, Concession 2, Woodhouse Township. Union No. 233, Lot 9, Concession 1 North, Dunn Township, is starting. Union No. 234, Lot 9, Concession 13, Walpole Township, is below 250 ft. Union No. 235 is rigging in Lot 1, Concession 3, Rainham Township.

Ranchmen's Officers

At the annual meeting shareholders of Ranchmen's Oil Co. elected the following directors: W. J. Thompson, Okotoks; George Riley, High River; Donald Kenney, Howard Oliver, R. G. Ironside, Calgary. Ranchmen's No. 1, LSD 16, Section 13-20-29w4, on the Aldersyde structure northeast of Turner Valley, is standing at 7,230 ft. after encountering a considerable show of light green crude in the top of the Dalhousie sand. Efforts are being made to arrange for completion of the test.

Gaspe Survey Started

The Quebec provincial government is conducting a topographical and geological survey of the Gaspe peninsula with special reference to its oil possibilities. A geological survey crew started work some weeks ago on Anticosti Island in the St. Lawrence gulf, where oil indications have also been reported. Between 1888 and 1900 there was considerable drilling in the Gaspe area by British interests, commercial production being secured in several wells, though owing to financial difficulties the field was later abandoned. Both areas are geologically related to the Albert-Westmoreland area in New Brunswick where oil and gas have been found in commercial quantities.

California Fields

(Continued from Page 97)

waiting for a crew. No. 32 Rosecrans was finished with a 7-in. water string landed at 7,320 ft. and 324 ft. of 5¾-in. liner including 290 ft. of perforated hung at 7,608 ft. G. F. Averill's outpost south of production in the Rosecrans field after failing to result in commercial production has been suspended, but King & Weymouth No. 2 Averill, south of this well, is going ahead and should determine the potentiality of the oil sand found by G. F. Averill several weeks ago but which has tested wet. In the Torrance field, Lebow-McNee Oil Co. has completed No. 3-B Kettler pumping 120 bbl. of 27.1-gravity cutting 10 per cent from the deep zone with bottom of the hole at 5,158 ft. Although very little hope can be held out for good production, operators are still working around in the Torrance field on a limited scale and one or two new wells will be started shortly.

North Texas Fields

(Continued from Page 86)

Cooper and others No. 2 T. P. Duncan, 1,202-15 ft., 46 bbl. Duncan and others No. 12 Duncan, 1,248 ft., dry. Sussex Oil Corp. No. 24 C. J. Shumake, 437 ft., dry.

Cooke County

Pace Petroleum Corp. No. 9 J. R. Winstead B, 1,186-97 ft., 71 bbl. M. Staniforth No. 1 B. Voth B, 1,733-98 ft., 188 bbl.

Jack County

Antelope Oil Co. No. 5 Mary Hoefle, 414-22 ft., 40 bbl. Antelope Oil Co. No. 6 Mary Hoefle, 416-22 ft., 25 bbl. K. E. Edmonds No. 5 J. T. Hunt, 456-70 ft., 5 bbl. B. C. Gilmore No. 1 J. T. Roney, 471 ft., dry. H. S. Grace No. 2 Mary Hoefle, 408-22 ft., 30 bbl. T. N. Smith No. 1 C. C. Bloodworth, 323 ft., dry. J. B. Sneed Nos. 7 and 8 J. M. Bloodworth, abandoned locations.

Montague County

Falls & Yeargin No. 6 Crow, 730-81 ft., 10 bbl. W. M. Frank No. 1 Cochran, 2,006 ft., dry. Rogers & Rogers No. 1 Charlotte W. Astley, 4,681-5,487 ft., 944 bbl.

Wichita County

Fisher & Dudley No. 5 F. P. Warren, 1,340-66 ft., 324 bbl. Ed Gant No. 1 W. R. Davis, 654 ft., dry. Magnolia Petroleum Co. No. 145 Hugh Reilly, 1,331-56 ft., 268 bbl. Mrs. R. E. Montgomery No. 1 H. G. Karrenbrock, 541-60 ft., 5 bbl. D. H. Bolin No. 2 D. R. Preston, 3,938-4,008 ft., 800 bbl. D. H. Bolin No. 3 D. R. Preston, 3,939-4,005 ft., 800 bbl. D. H. Bolin No. 6 D. R. Preston, 3,930-4,023 ft., 600 bbl. Consolidated Oil Co. No. 2 E. M. Barnes, 3,960-4,005 ft., 625 bbl. Deep Rock Oil Co. No. 4 E. H. Hamilton, 3,735-3,850 ft., 848 bbl. Fain-McGaha No. 11 E. P. Griffin B, 3,792-3,814 ft., 1,584 bbl. W. H. Hammon No. 11 S. H. McCarty L, 3,975-4,010 ft., 592 bbl. W. L. Hawkins No. 5 W. T. Waggoner, 606 ft., dry. W. L. Hawkins No. 7 W. T. Waggoner, 750 ft., dry. King Oil-Perkins & Cullum No. 6 W. P. Ferguson, 3,682-3,792 ft., 720 bbl. P. G. Lake, Inc., No. 4 M. E. Reilly, 3,918-84 ft., 705 bbl. W. A. McClure No. 2 Goetze Bros., 463 ft., dry. Mitchell No. 3 Sue Mitchell B, 1,383 ft., dry. Montgomery-Woodlief No. 2 F. M. Weaber, 1,246-62 feet, 17½ bbl. George Proctor No. 36 Ed Foster A, 1,678-88 ft., 66 bbl. Shell and Phillips No. 6 D. R. Preston, 3,922-4,003 ft., 525 bbl. Venmex Oil Co. of Texas No. 5-A State of Texas, 3,675-3,785 ft., 1,345 bbl.

Young County

Paul B. Worthington No. 1 Ben Schlegel, 1,165 ft., dry. W. R. Worthington No. 4 Couper & Siebold, 1,198 ft., dry. H. Zweifel No. 1 J. C. Vaughn B, 2,493-2,539 ft., 10,000,000 cu. ft. of gas.

Wilbarger County

Phillips Petroleum Co. No. 1 R. L. Castleberry, abandoned location.

EAST TEXAS FIELD COMPLETIONS

Gregg County—Longview Area

Magnolia Petroleum Co. No. 15 Acey Christian, 3,658-75 ft., 75 bbl. Petroleum Co. No. 13 L. M. Colburn, 3,560-3,600 ft., 80 bbl. Stanolind Oil & Gas Co. No. 17 E. M. Whatley, 3,505-61 ft., 54 bbl. Atlantic Refining Co. No. 40-A Burnside, 3,520-3,642 ft., 96 bbl. X.Y.Z. Oil Co. No. 1 W. L. Fuller, 3,690-93 ft., 35 bbl. Humble Oil & Refining Co. No. A-1-S D. Johnson, salt water injection well.

Gregg County—Kilgore Area

J. Kemp No. 7 A. A. King, 3,522-33 ft., 20 bbl. Texas Co. No. 45 M. T. Cole, 3,520-30 ft., 47 bbl. M. E. Trapp No. 6 J. King, 3,550-3,600 ft., 60 bbl. J. C. Hawkins No. A-1-a S. Williams, 3,618-48 ft., 10 bbl. Gulf Oil Corp. No. 22 B. Watson, 3,562-71 ft., 50 bbl.

Rusk County

Stanolind Oil & Gas Co. No. 41-A A. C. Maxwell, 3,760-3,826 ft., 45 bbl.

EAST CENTRAL TEXAS COMPLETIONS

Anderson County—Long Lake Field

Carter-Gragg Oil No. 2 J. E. McGaughey, 5,312-24 ft., 84 bbl. Hunt Oil Co. No. 1 Sutton-Wolverton, 5,316-83 ft., 115,000,000 cu. ft. of gas.

Franklin County—Talco Field

Humble Oil & Refining Co. No. 8 Penn-fee, 4,232-95 ft., 204 bbl.

WILDCAT OPERATIONS

CALIFORNIA

IMPORTANT WELLS AND NORTHERN CALIFORNIA WILDCATS

Company, well, location, and county—	S.T.R.	Depth	Status
Hogan Pet., No. 1-A Zabala, Casmalia, Santa Barbara	33- 9-34	2,815	sd. sh. drlg.
Sun-Bell Drlg., No. 1 Smith, Lompoc, Santa Barbara	29- 8-34	122	sd. sh. drlg.
Arnold, E. C., No. 2 Careaga, Los Alamos, S. Barbara	8- 8-33	6,838	cmtd. fish
Field, O. C., No. 1 White, Cat Canyon, Santa Barbara	21- 9-33	6,640	br. sh. drlg.
General Pet., No. 4 More, Goleta, Santa Barbara	15- 4-28	4,757	redrlg. 4,100
Trans-Oceanic Oil, No. 3 Mdivani, Mesa, S. Barbara	28- 4-27	1,598	P.B. 1,575
Richfield Oil, No. 2 Marcos, Sisquoc, Santa Barbara	20- 6-29	607	sd. sh. drlg.
St. Louis Oil, No. 1 Williamson, Sespe, Ventura	1- 4-20	1,994	cleaning out
Section 20 Oil, No. 21, Sespe, Ventura	20- 5-19	2,941	cleaning out
Spelk Oil, No. 2 Hill, Sespe, Ventura	33- 5-19	3,714	deepening
Galveston Oil, No. 1 Basola, Bardsdale, Ventura	5- 3-19	3,139	cmtd. 2,815
Texas Co., No. 137 Shiells, Shiells Canyon, Ventura	4- 3-19	3,272	redrlg. 2,865
El Rancho Oil, No. 3 Elkins, Shiells Canyon, Ventura	9- 3-19	3,731	reaming
Continental Oil, No. 11 Grubb, San Miguelito, Ventura	24- 3-24	6,645	hd. sd. drlg.
C. C. M. Oil, No. 7-A Hobson, Padre Canyon, Ventura	15- 3-24	5,870	rig to pump
C. C. M. Oil, No. 27-B Hobson, Rincon, Ventura	16- 3-24	4,917	recmtd. 4,848
Rincon Dev., No. 82-4 Shudde, Rincon, Ventura	Tideland	2,078	cleaning out
Tide Water A. O., No. 40 V.L.W., Ventura Ave., Ven.	25- 3-23	10,769	tested wet
Tide Water A. O., No. 14 McGonigle, Ven. Ave., Ven.	23- 3-23	9,960	hd. sh. drlg.
Tide Water A. O., No. 15 McGonigle, Ven. Ave., Ven.	23- 3-23	2,198	sd. sh. drlg.
Tide Water A. O., No. 84 Lloyd, Ventura Ave., Ven.	27- 3-23	7,080	sd. sh. drlg.
Tide Water A. O., No. 124 Lloyd, Ventura Ave., Ven.	23- 3-23	9,660	sd. sh. drlg.
Tide Water A. O., No. 8 Hartman, Ventura Ave., Ven.	22- 3-23	8,840	sd. sh. drlg.
Shell Oil, No. 100 Taylor, Ventura Ave., Ventura	29- 3-23	4,965	sd. sh. drlg.
Shell Oil, No. 34 Edison, Ventura Ave., Ventura	28- 3-23	3,984	sd. sh. drlg.
Brit. Amer. Pet., No. 8 Hartman, Ven. Ave., Ven.	22- 3-23	2,080	sd. sh. drlg.
Emigrant Oil, No. 1 Den, Devil's Den, Kern	24-25-18	4,278	pull liner
Belridge Oil, No. 35-38, North Belridge, Kern	35-27-20	8,249	O.S. drlg.
Belridge Oil, No. 28-17, North Belridge, Kern	28-27-20	6,085	sd. sh. drlg.
Belridge Oil, No. 26-25, North Belridge, Kern	26-27-20	8,500	redrlg. 8,137
Tide Water A. O., No. 21, North Belridge, Kern	21-27-20	7,498	sd. sh. drlg.
Richfield Oil, No. 3 Belridge, North Belridge, Kern	22-27-20	8,300	cleaning out
Calif. Expl., No. 2 Occidental, Lost Hills, Kern	24-26-20	6,000	sd. sh. drlg.
Standard Oil, No. 2-3 Tulare Farms, Delano, Kern	35-24-23	2,220	sd. sh. drlg.
Standard Oil, No. 2-2 Tulare Farms, Delano, Kern	34-24-23	2,470	4,000 M.c.f.
Standard Oil, No. 2-4 Tulare Farms, Delano, Kern	34-24-23	2,470	sd. sh. drlg.
Crusaders Oil, No. 1 Quinn, Richgrove, Kern	9-25-27	1,475	idle
Dilamar Oil, No. 3 Quinn, Jasmin, Kern	15-25-27	2,902	cleaning out
Sieman, Fred, No. 2 Extension, Edison, Kern	6-30-29	4,156	rig to pump
Grizzly Bear Oil, No. 3 Kelley, Rd. Mountain, Kern	6-28-29	1,709	fish baller
Crestmont Oil, No. 6 Staley, Round Mountain, Kern	8-28-29	1,575	pump 128 b.d.
Mayes, A. S., No. 1 Coffee, Round Mountain, Kern	6-28-29	1,502	sd. sh. drlg.
D. B. K., No. 5 Kern, Kern River, Kern	34-28-28	386	P.B. 345
D. B. K., No. 6 Kern, Kern River, Kern	34-28-28	306	sd. sh. drlg.
Grogg & Fisher, No. 1 Kern, Kern River, Kern	27-28-28	438	sd. sh. drlg.
Texas Co., No. 2 Jewett, Arvin, Kern	16-31-29	4,381	sd. sh. drlg.
Standard Oil, No. 2 Jewett, Arvin, Kern	16-31-29	6,160	flow 1,800 b.d.
Standard Oil, No. 4 Jewett, Arvin, Kern	16-31-29	2,198	sd. sh. drlg.
Standard Oil, No. 1 Tupman, Arvin, Kern	22-31-29	3,996	sd. sh. drlg.
Universal Consd. Oil, No. 2 Derby, Arvin, Kern	15-31-29	6,119	O.S. drlg.
Western Gulf Oil, No. 42-B, K.C.L., Fruitvale, Kern	14-29-27	2,945	cleaning out
Meridian Pet., No. 1 Deep Test, Fruitvale, Kern	23-29-27	3,840	sd. sh. drlg.
Getty, George F., Inc., No. 1 Jannsen, Wasco, Kern	7-27-24	10,120	sd. sh. drlg.
General Pet., No. 2 Van Ness, Rio Bravo, Kern	2-29-25	11,514	flow 1,760 b.d.
Union Oil, No. 10-34, K.C.L., Rio Bravo, Kern	34-28-25	8,793	sd. sh. drlg.
Superior Oil, No. 1 Fink, Rio Bravo, Kern	27-28-25	10,390	sd. sh. drlg.
Standard Oil, No. 1 Ross, Greeley, Kern	20-29-26	9,002	sd. sh. drlg.
Standard Oil, No. 11-18, K.C.L., Greeley, Kern	18-29-26	9,770	hd. sh. drlg.
Standard Oil, No. 11-19 K.C.L., Greeley, Kern	18-29-26	9,666	sd. sh. drlg.
Standard Oil, No. 12-6, K.C.L., Greeley, Kern	30-29-26	11,942	D.P. lost
Continental Oil, No. 2-D, K.C.L., Bellevue, Kern	14-30-26	10,694	hd. sh. drlg.
Shell Oil, No. 23-28-B, K.C.L., Canal, Kern	28-30-26	7,292	sd. sh. drlg.
Shell Oil, No. 25-14-A, K.C.L., Canal, Kern	14-30-25	8,340	O.S. drlg.
General Pet., No. 1 Sullivan, Strand, Kern	12-29-25	990	sd. sh. drlg.
Ohio Oil, No. 13-E, K.C.L., Canal, Kern	13-30-25	6,691	sd. sh. drlg.
Richfield Oil, No. 12-33-A, K.C.L., Tupman, Kern	33-30-25	8,091	sd. sh. drlg.
Standard Oil, No. 21-1, K.C.L., Tupman, Kern	19-30-25	9,394	chert drlg.
Richfield Oil, No. 14-3-B, K.C.L., Coles Levee, Kern	3-31-25	9,050	hd. sh. drlg.
Standard Oil, No. 20-1, K.C.L., Coles Levee, Kern	9-31-25	9,216	completing
Ohio Oil, No. 3-F, K.C.L., Coles Levee, Kern	11-31-25	8,196	hd. sh. drlg.
Union Oil, No. 2-11, K.C.L., Coles Levee, Kern	11-31-25	8,280	sd. sh. drlg.
Standard Oil, No. 216 Tupman, Elk Hills, Kern	36-30-24	2,975	pump 50 b.d.
Standard Oil, No. 218-15-D, Midway-Sunset, Kern	15-32-24	3,502	cleaning out
Gibson Oil, No. 6 O'Brien, Midway-Sunset, Kern	6-11-23	635	sd. sh. drlg.
Vista Grande Oil, No. 1 Schultz, Midway-Sunset, Kern	36-32-23	3,630	pump water
Quality Oil, No. 6-W.P., Midway-Sunset, Kern	27-32-23	910	sd. sh. drlg.
Van Fleet & Durkee, No. 3 Hoyst, Mid.-Sunset, Kern	36-32-23	2,510	P.B. 2,226
General Pet., No. 1 B.V.A., Midway-Sunset, Kern	1-32-24	6,630	sd. sh. drlg.
National Oil, No. 33 Sunset, Midway-Sunset, Kern	35-32-23	1,230	sd. sh. drlg.
Par Oil & Gas, No. 1 Hager, Midway-Sunset, Kern	16-31-22	3,010	sd. sh. drlg.
West. Gulf Oil, No. 1 Panhandle, B. Vista Lake, Kern	3-32-26	9,280	sd. sh. drlg.
Richfield Oil, No. 1 K.C.L., Wheeler Ridge, Kern	28-11-20	11,004	cleaning out
Continental Oil, No. 1-F, K.C.L., San Emidio, Kern	5-10-21	6,040	sd. sh. drlg.
Bannow, L. E., No. 1 Irwin, San Emidio, Kern	15-10-23	1,887	fish D.P.
Shell Oil, No. 52-2-13-A, K.C.L., San Emidio, Kern	13-11-22	1,990	sd. sh. drlg.
Petrol Corp., No. 33-5 Reserve, Tejon, Kern	33-11-19	8,946	redrlg. 7,820
Shell Oil, No. 48-30 Port Costa, Turk, Fresno	30-17-16	9,690	gr. sd. drlg.
Superior Oil, No. 1 S.P.L., Turk, Fresno	15-18-16	7,550	gr. sd. drlg.
Texas Co., No. 1 Loescher, Burrell, Fresno	12-17-16	8,292	sd. sh. drlg.
Gatos Creek Oil, No. 1 Cable, Gatos Creek, Fresno	19-19-13	116	sd. sh. drlg.
Diamond, H. P., No. 7 Hill, West Coalinga, Fresno	35-20-14	188	sd. sh. drlg.
Nagayami & Haranaga, No. 2 Hill, W. Coal., Fresno	14-20-14	815	water well
Rylatt, Henry, No. 3 Kipling, West Coalinga, Fresno	26-20-14	2,010	cleaning out
Union Oil, No. 86-18 Cook, NE. Coalinga, Fresno	18-19-16	2,996	sd. sh. drlg.
Bandini Pet., No. 48-18 Webb, NE. Coalinga, Fresno	18-19-16	6,926	cleaning out
Amerada Pet., No. 26-17 S.P.L., NE. Coalinga, Fresno	17-19-16	8,396	gr. sd. drlg.
Lytle, R. S., agent, No. 48-7-F, SE. Coalinga, Fresno	7-20-16	7,060	hd. sh. drlg.
Lytle, R. S., agent, No. 75-7-F, SE. Coalinga, Fresno	7-20-16	8,150	flow 1,804 b.d.
Lytle, R. S., agent, No. 5-18-F, SE. Coalinga, Fresno	18-20-16	7,486	flow 2,950 b.d.
Texas Co., No. 1 Exeter fee, SE. Coalinga, Fresno	6-20-16	8,165	flow 1,270 b.d.
Texas Co., No. 2 Exeter fee, SE. Coalinga, Fresno	6-20-16	6,990	sd. sh. drlg.
Standard Oil, No. 84-13-C fee, SE. Coalinga, Fresno	13-20-15	6,688	sd. sh. drlg.
Superior Oil, No. 2 Hight, SE. Coalinga, Fresno	8-20-16	6,990	sd. sh. drlg.
Superior Oil, No. 1 P.V.F., SE. Coalinga, Fresno	22-20-15	8,358	fish D.P.
Holly Dev., No. 82-12-C, SE. Coalinga, Fresno	12-20-15	5,971	hd. sh. drlg.
K. N. D. A., No. 61-34-J, Kettleman North, Fresno	34-21-17	8,611	deepening
K. N. D. A., No. 4-18-Q, Kettleman North, Kings	18-22-18	8,295	recmtd. 8,293
K. N. D. A., No. 2-20-Q, Kettleman North, Kings	20-22-18	7,640	O.S. drlg.
K. N. D. A., No. 4-22-Q, Kettleman North, Kings	22-22-18	6,498	br. sh. drlg.
K. N. D. A., No. 47-22-Q, Kettleman North, Kings	22-22-18	280	sd. sh. drlg.
K. N. D. A., No. 4-26-Q, Kettleman North, Kings	26-22-18	7,940	O.S. drlg.
Standard Oil, No. 2-19-J, Kettleman North, Fresno	19-21-17	6,504	cleaning out
Standard Oil, No. 21-19-J, Kettleman North, Fresno	19-21-17	8,912	will deepen
Standard Oil, No. 27-7-Q, Kettleman North, Kings	7-22-18	3,286	sd. sh. drlg.
Standard Oil, No. 87-7-Q, Kettleman North, Kings	7-22-18	7,698	hd. sh. drlg.
Standard Oil, No. 52-17-Q, Kettleman North, Kings	17-22-18	8,665	sd. sh. drlg.
Standard Oil, No. 63-17-Q, Kettleman North, Kings	17-22-18	5,373	sd. sh. drlg.
Standard Oil, No. 85-17-Q, Kettleman North, Kings	17-22-18	6,790	cmtd. 6,781
Standard Oil, No. 87-17-Q, Kettleman North, Kings	17-22-18	6,560	cmtd. 6,558
Standard Oil, No. 63-21-Q, Kettleman North, Kings	21-22-18	5,750	sd. sh. drlg.
Standard Oil, No. 72-21-Q, Kettleman North, Kings	21-22-18	8,660	sd. sh. drlg.
Standard Oil, No. 83-21-Q, Kettleman North, Kings	21-22-18	7,785	cleaning out
Newton, S. M., No. 1 Stafford, Panorama, S. L. Obispo	18-21-21	3,246	sd. sh. drlg.
Cal. Expl., No. 1 Irons, Cuyama Valley, S. L. Obispo	19-10-24	2,340	idle
Standard Oil, No. 1 Calpac, Rio Vista, Solano	15- 5-2	5,582	gr. sd. drlg.
Buttes Oilfields, Inc., No. 5 Butte, Sutter B., Sutter	1-15-1	5,075	sd. sh. drlg.

IMPORTANT WELLS AND SOUTHERN CALIFORNIA WILDCATS

Company, well, location, and county—	S.T.R.	Depth	Status
D. & B. Oil, No. 5 Lomita, Torrance, Los Angeles	23- 4-14	5,090	sd. sh. drlg.
Elliott, D. W., No. 8 Kettler, Torrance, Los Angeles	23- 4-14	5,186	redrlg. 5,186
O'Donnell, J. E., No. 72 Lomita, Torrance, L. Angeles	30- 4-14	5,246	flow 360 b.d.
Lebow-McNee Oil, No. 3-B Kettler, Torrance, L. Ang.	23- 4-14	5,158	pump 114 b.d.
C. C. M. Oil, No. 12 Kettler, Torrance, Los Angeles	23- 4-14	5,119	pump 70 b.d.
Rolling Hills Pet., No. 1 Weston, Palos Verdes, L. A.	27- 4-14	5,530	deepening
Union Oil, No. 69 Callender, Dominguez, Los. Ang.	32- 3-13	6,060	sd. sh. drlg.

KEY TO ABBREVIATIONS USED IN DRILLING REPORTS

Abd., abandoned.
Acd., acidized.
B.O., barrels of oil.
B.P.D., barrels per day.
B.D., barrels daily.
B.P., back pressure.
B.R., building rig.
B. ck., bottom choke.
Br. sh., brown shale.
B.S., basic sediment.
C.&P., cellar and pits.
Cd. or Crd. cored.
C.D., correct depth.
Cg., coring.
Cmtd., cemented.
C.O., cleaning out.
Comp., completed.
Compr., compressor.
C.P., casing pressure, also cement through perforations.
Csg., casing.
D.D., drilling (or drilled) deeper.
Drlg. or Drg., drilling.
Drk. or Dk., derrick.
D.S., drill stem.
D.S.T., drill stem test.
D.&A., dry and abandoned.
Fsg., fishing.
Gbo., gumbo.
G.I., gas injection.
Gr., gravity.
Gr. sd., gray sand.
Grn. sh., green shale.
Hd. sd., hard sand.
H.F.W., hole full of water.
I.P., initial production.
L., lime.
L.D.D., later drilled deeper.
Lnr., liner.
Loc., location.
M.I.M., moving in material.
M.I.R., moving in rig.
M.I.R.T., moving in rotary tools.
M.O.T., milling on tools.
O.I.H., oil in hole.
O.S., oil sand.
O.T.D., old total depth.
O.W.D.D., owell drilling deeper.
O.W.P.B., old well plugging back.
P.B., plugging back.
P.B.P., pulling or pulled big pipe.
P.L., pipe line.
P.L.O., pipe line oil.
Pmpg., pumping.
P.O.P., putting on pump.
P.P., pulled pipe.
Rd. sd., red sand.
Rd. sh., red shale.
Recmt., recemented.
Recvd., recovered.
Rmg., reaming.
Redrlg., redrilling.
Rng., running.
R.O.G., rig on ground.
R.P., rock pressure.
R.U., rigging up.
R.U.R., rigging up rotary.
R.U.S.T., rigging up standard tools.
R.&T., rods and tubing.
S. or Sd., sand.
S.D., shut down.
Sdy. sh., sandy shale.
Sdtrk. or St., sidetracking.
S.D.P.L., shut down for pipe line.
S.D.O., or S.D.W.O., shut down awaiting orders.
S.G., show gas.
Sh.&L., shale and lime.
S.I., shut in.
S.I.P., shut in, prorated.
S.L.M., steel line measurement.
S.O., show oil.
S.O.G.&W., show of oil, gas and water.
Spdg. or Spd., spudding.
S.R., straightreaming.
Stdg., standardizing (also standing)
S.W., salt water.
Swbg., swabbing.
T.A., temporarily abandoned.
Tbg., tubing.
T.D., total depth.
T. ck., top choke.
T.P., tubing pressure.
Tr., tract.
Tstd., tested.
U.R., underreaming.
W.I.H., water in hole.
W.O., workover.
W.O.C., or W.O.C.S., waiting on cement to set.
W.O.O., waiting for orders.
W.P., working pressure.
W.S.O., water shutoff.
W.S.S.O.K., water shutoff O.K.
W.S.R. or W.O.S.R., awaiting standard rig.
Wtr., water.

Union Oil, No. 70 Callender, Dominguez, Los Ang.	32-	3-13	2,972	sd. sh. drlg.
Shell Oil, No. 32 Reyes, Dominguez, Los Angeles	33-	3-13	4,220	redrlg. 3,998
Union Oil, No. 32 Rosecrans, Rosecrans, Los Angeles	19-	3-13	7,610	O.S. drlg.
Universal Consd. Oil, No. 17 Trust, Rosecrans, L. A.	18-	3-13	7,800	O.S. drlg.
Royalty Service, No. 4 Gordon, Rosecrans, Los Ang.	19-	3-13	7,900	fish D.P.
Bankline Oil, No. 1 Kirby, Rosecrans, Los Angeles	18-	3-13	7,723	pump 40 b.d.
King & Weymouth, No. 2 Averill, Rosecrans, L. A.	20-	3-13	6,070	sd. sh. drlg.
Averill, G. F., No. 1 Howard, Rosecrans, Los Angeles	20-	3-13	7,645	swab. water
So. Cal. Pet., No. 1 Siabaugh, Rosecrans, Los Angeles	19-	3-13	3,293	sd. sh. drlg.
Trans-Western Oil, No. 1 Beloil, Potrero, Los Angeles	28-	2-14	5,450	redrlg. 3,198
Casa Grande Oil, No. 1 Lopez, San Fernando, L. A.	1-	2-15	1,284	sd. sh. drlg.
Tide Water A. O., No. 11 Potter, Aliso Canyon, L. A.	27-	3-16	4,194	hd. sd. drlg.
O'Donnell, J. E., No. 1 Hammond, Newhall, Los Ang.	8-	3-16	5,220	sd. sh. drlg.
Redwood Oil, No. 1 Mitchell, Mint Canyon, Los Ang.	22-	4-15	109	idle
Lang, E. M., No. 1 Rupy, Castaic, Los Angeles	7-	5-16	372	sd. sh. drlg.
Barnsdall Oil, No. 6 R.S.F., Newhall, Los Angeles	27-	4-17	5,294	sd. sh. drlg.
Barnsdall Oil, No. 7 R.S.F., Newhall, Los Angeles	27-	4-17	5,288	sd. sh. drlg.
General Pet., No. 40 Ford, Wilmington, Los Angeles	4-	5-13	2,587	sd. sh. drlg.
General Pet., No 5 Blinn, Wilmington, Los Angeles	4-	5-13	3,250	pump 147 b.d.
General Pet, No. 7 S.P., Wilmington, Los Angeles	2-	5-13	4,080	flow 1,738 b.d
Gremac Oil, No. 1 Harbor, Wilmington, Los Angeles	4-	5-13	3,678	flow 651 b.d.
Long Beach Dev., No. 7-X Harbor, Wilmington, L. A.	3-	5-13	3,276	O.S. drlg.
Long Beach Dev., No. 8-X Harbor, Wilmington, L. A.	2-	5-13	2,984	sd. sh. drlg.
Long Beach Dev., No. 9-X Harbor, Wilmington, L. A.	2-	5-13	2,876	sd. sh. drlg.
Long Beach Dev., No. 10-X Harbor, Wilmington, L. A	2-	5-13	2,654	sd. sh. drlg.
Long Beach Dev., No. 5-Y Harbor, Wilmington, L. A.	2-	5-13	3,989	flow 234 b.d.
Long Beach Dev., No. 9-Y Harbor, Wilmington, L. A.	2-	5-13	2,350	sd. sh. drlg.
Long Beach Dev., No. 1-Z Harbor, Wilmington, L. A.	2-	5-13	2,582	sd. sh. drlg.
Long Beach Dev., No. 2-Z Harbor, Wilmington, L. A.	2-	5-13	1,177	sd. sh. drlg.
Oakes & Combs, No. 5-D Harbor, Wilmington, L. A.	3-	5-13	3,925	redrlg. 3,920
Pet. Midway, No. 1-G Kupfer, Wilmington, Los Ang.	35-	4-13	3,468	cleaning out
Ring Oil, No. 3 Harbor, Wilmington, Los Angeles	35-	4-13	3,609	P.B. 2,489
Signal O. & G., No. 3-P.D., Wilmington, Los Angeles	3-	5-13	4,210	O.S. drlg.
Signal O. & G., No. 4-P.D., Wilmington, Los Angeles	3-	5-13	4,225	O.S. drlg.
Signal O. & G., No. 2-S.P., Wilmington, Los Angeles	3-	5-13	2,947	sd. sh. drlg.
Sunray Oil, No. 842-2 Gilmore, Wilmington, Los Ang.	33-	4-13	5,775	redrlg. 5,760
Union Pacific, No. 103, Wilmington, Los Angeles	3-	5-13	2,895	sd. sh. drlg.
Union Pacific, No. 111, Wilmington, Los Angeles	3-	5-13	2,462	sd. sh. drlg.
Union Pacific, No. 112, Wilmington, Los Angeles	3-	5-13	2,148	sd. sh. drlg.
Union Pacific, No. 16-E, Wilmington, Los Angeles	3-	5-13	3,975	flow 252 b.d.
Union Pacific, No. 18-E, Wilmington, Los Angeles	3-	5-13	2,738	cmtd. 2,728
Wilton Oil, No. 8 Harbor, Wilmington, Los Angeles	3-	5-13	2,955	flow 260 b.d.
Ridge Oil, No. 1 Club, Montebello, Los Angeles	3-	2-12	8,029	may abdn.
Kern Oil, No. 25 Monterey, Montebello, Los Angeles	2-	2-12	7,657	sd. sh. drlg.
Kern Oil, No. 32 Monterey, Montebello, Los Angeles	2-	2-12	2,998	sd. sh. drlg.
Kern Oil, No. 33 Monterey, Montebello, Los Angeles	2-	2-12	2,642	sd. sh. drlg.
Kern Oil, No. 2 Eggleston, Montebello, Los Angeles	2-	2-12	7,161	testing
Kern Oil, No. 5 Mulholland, Montebello, Los Angeles	2-	2-12	2,095	sd. sh. drlg.
Standard Oil, No. 4 Harvey, Montebello, Los Angeles	2-	2-12	7,260	O.S. drlg.
Standard Oil, No. 3 Braun, Montebello, Los Angeles	2-	2-12	7,625	flow 580 b.d.
Standard Oil, No. 6 Braun, Montebello, Los Angeles	2-	2-12	2,396	sd. sh. drlg.
Standard Oil, No. 7 Whitehead, Montebello, Los Ang.	3-	2-12	4,876	sd. sh. drlg.
Standard Oil, No. 1 Kaufman, Montebello, Los Ang.	2-	2-12	7,078	O.S. drlg.
Union Oil, No. 4 Wilcox, Montebello, Los Angeles	2-	2-12	7,476	sd. sh. drlg.
Union Oil, No. 31 La Merced, Montebello, Los Angeles	1-	2-12	4,740	sd. sh. drlg.
Union Oil, No. 32 La Merced, Montebello, Los Angeles	2-	2-12	7,660	O.S. drlg.
Union Oil, No. 34 La Merced, Montebello, Los Angeles	2-	2-12	2,687	sd. sh. drlg.
Union Oil, No. 5 Howard & Smith, Montebello, L. A.	2-	2-12	6,411	redrlg. 2,287
Union Oil, No. 2 Calkins, Montebello, Los Angeles	2-	2-12	7,645	sd. sh. drlg.
Union Oil, No. 5 Paul Howard, Montebello, Los Ang.	2-	2-12	7,405	O.S. drlg.
Bev. Mont. Oil, No. 1 Corbett, Montebello, Los Ang.	11-	2-12	7,404	sd. sh. drlg.
Bev. Mont. Oil, No. 2 Meyer, Montebello, Los Ang.	2-	2-12	4,681	sd. sh. drlg.
B-A Oil Prod., No. 1 Oswald, Montebello, Los Angeles	2-	2-12	5,135	sd. sh. drlg.
McVicar & Rood, No. 2 Manz, Montebello, Los Ang.	2-	2-12	7,630	O.S. drlg.
Pongratz Pet., No. 1 Newmark, Montebello, Los Ang.	3-	2-12	7,641	recmtd. 7,545
Mont. Res. Oil, No. 1 Reservoir, Montebello, Los Ang.	2-	2-12	6,715	deepening
Fullerton Oil, No. 1 Trustee, Montebello, Los Angeles	2-	2-12	3,753	sd. sh. drlg.
Fullerton Oil, No. 1 Scott, Montebello, Los Angeles	2-	2-12	2,296	sd. sh. drlg.
McKeon, John, No. 1 Cowan, Montebello, Los Angeles	1-	2-12	5,584	sd. sh. drlg.
Star Pet., No. 1 Banks, Montebello, Los Angeles	2-	2-12	6,460	sd. sh. drlg.
Caminol Co., No. 1-15 Cowan, Montebello, Los Angeles	2-	2-12	3,575	redrlg. 3,466
Wood-Calahan Oil, No. 1 Bartlett, Montebello, L. A.	2-	2-12	5,380	sd. sh. drlg.
Bush Oil, No. 1 Alauzet, Montebello, Los Angeles	3-	2-12	6,298	sd. sh. drlg.
Texas Co., No. 18 Baldwin, East Montebello, L. Ang.	6-	2-11	7,970	sd. sh. drlg.
Colorado Oil, No. 19 Granger, Whittier, Los Angeles	22-	2-11	5,038	sd. sh. drlg.
Taylor Prod., No. 1 Gregg, Citrus Grove, Los Angeles	17-	2-11	6,062	may abdn.
Kelso, F. W., No. 1 Brea, Puente Hills, Los Angeles	13-	2-10	2,161	sd. sh. drlg.
Parry & Associates, No. 1 Pool, Long Beach, L. Ang.	29-	4-12	7,820	circulating
Texas Co., No. 15 Harlow Kent, Long Beach, L. Ang.	19-	4-12	3,653	sd. sh. drlg.
South Basin Oil, No. 95 Signal, Long Beach, L. Ang.	29-	4-12	2,080	sd. sh. drlg.
Rolling Hills Pet., No. 1 Weston, Palos Verdes, L. A.	27-	4-14	5,542	deepening
Sepulveda Oil, No. 1 Grady, San Pedro, Los Angeles	23-	5-14	614	will deepen
Union Oil, No. 18 Y.L.G., Los Angeles	34-	3-9	3,141	sd. sh. drlg.
Traders Oil, No. 1 Wagner, Richfield, Los Angeles	22-	3-9	4,360	sd. sh. drlg.
Tide Water A. O., No. 54 Anaheim, E. Coyote, Orange	24-	3-10	3,660	redrlg. 3,648
Severns Drlg., No. 4 McNally, West Coyote, Orange	24-	3-11	6,208	sd. sh. drlg.
Southwest Expl., No. 16 State, Hunt. Beach, Orange	10-	6-11	4,529	redrlg. 3,798
Southwest Expl., No. 20 State, Hunt. Beach, Orange	10-	6-11	3,291	sd. sh. drlg.
Eyer & Peters, No. 1 Newland, Hunt. Beach, Orange	12-	6-11	3,750	will deepen
Duchess Oil, No. 4 Farnsworth, Hunt. Beach, Orange	34-	5-11	3,600	rigged up
Pac. Amer. Oil, No. 5 Orange, Hunt. Beach, Orange	11-	6-11	1,198	sd. sh. drlg.
Petremont Oil, No. 1 Norris, Hunt. Beach, Orange	36-	5-11	4,470	sd. sh. drlg.
Carbon Can. Oil, No. 1 Schuch, Carbon Can., S. Bern.	36-	2-9	256	idle
Hokum Oil, No. 1 Hokum, Carbon Can., San Bern.	31-	2-8	2,298	sd. sh. drlg.

OKLAHOMA

Week Ending July 8

NORTHERN OKLAHOMA

Atoka County

Giblett No. 1 Rich, SE SE SW Sec. 2-1-12. S.D. 728 ft.

Caddo County

Sinclair Prairie Oil Co. No. 1 Gorman, SW NW NW Sec. 1-16-13w. Drlg. 3,127 ft.

Cleveland County

Hall & Briscoe No. 1 Mantooth, NW NW NW Sec. 24-6-1e. Wdfrd. 3,500 ft.; drlg. 5,465 ft.

Nels Burton No. 1 Boggs, NE NE SE Sec. 16-9-2w. 2nd Wlx. 7,585 ft.; T.D. 7,646 ft.; P.B. 7,473 ft.; flwd. 100 B.O. in 11 hrs.; acd. and S. 10 B.F.P.H.

Nels-Burrton No. 1 Hirsch, NW NW NE Sec. 17-9-2w. O.W.P.B.; O.T.D. 7,692 ft.; T.D. 7,695 ft.

Comanche County

Mid Night Oil No. 1 Howe, NW NW NE Sec. 30-2-13w. O.W.D.D.; O.T.D. 703 ft.; T.D. 894 ft.; S.D.

Ellis County

Enterprise Drlg. Co. No. 1 Wahl, SE NW NW Sec. 1-19-25w. Sd. 660-65 ft.; T.D. 730 ft.; S.D.O.

Garfield County

Gulf Oil Corp. No. 1 Thomas, C W½ SW SW Sec. 21-24-4w. Drlg. 4,625 ft.

Keriyn Oil Co. No. 1 Hein, NW NW NW Sec. 36-22-4w. T.D. 5,042 ft.; S. D.O.

Grady County

J. B. Nichlos No. 1 Bushnell, NW NE SE Sec. 7-5-8w. Dry sd. 2,605 ft.; drlg. 3,004 ft.

Grant County

Carter Oil No. 1 Staggers, C W½ SE NW Sec. 4-25-3w. T.D. 5,528 ft.; set 7-in. 5,417 ft.; W.O.C.

Smythe & O'Mara No. 1 State, C SE SW Sec. 16-25-4w. Sdy. dolo. 5,945 ft.; Wlx. 5,985 ft.; T.D. 6,215 ft.; rng. Schlumberger.

Harmon County

Russo Drlg. No. 1 Abernathey, C SW SW Sec. 12-2-26w (3,000-ft. test). T.D. 2,802 ft.; shot; S. 2 B.O.; D.&A.

Hughes County

Carter Oil No. 1 Hamilton, C W½ NE SW Sec. 33-4-9. T.D. 4,235 ft., S.D.

Continental Oil No. 1 Hudson, SE SE SE Sec. 8-4-9. Wdfrd. 5,525 ft.; Vla. 5,818 ft.; 1st Wlx. 6,312 ft.; T.D. 6,333 ft.

Harper County

Sinclair Prairie No. 1 George, SW SW SW Sec. 5-27-23w. T.D. 6,500 ft. in Miss.; rng. Schlumberger.

Jackson County

English & Morgan No. 1 Lee, NW NW SE Sec. 36-2-19w. S.G. 1,360-63 ft.; T.D. 1,603 ft.; P.B. 1,243 ft.; S.D.O.

Jefferson County

H. M. Weir No. 1 Carmichael, NE NE SW Sec. 23-7s-7w. Drlg. 3,525 ft.

Kay County

Tide Water Asso. No. 1 Kelle, SE SE NE Sec. 27-28-1w. Wlx. 3,547 ft.; T.D. 3,705 ft.; S.D.O.

Roy Starr No. 1 State, NE NE SW Sec. 13-29-2w. Miss. 3,638 ft.; T.D. 3,691 ft.; S.D., repairs.

Kingfisher County

Ace Gutowsky No. 1 Lankford, NE NE SE Sec. 34-17-6w. Miss. 7,014 ft.; Woodford 7,531 ft.; Manr. 7,562 ft.; Wlx. 8,105 ft.; 2nd Wlx. 8,275 ft.; T.D. 8,330 ft.; S.D.O.

Kiowa County

C. M. Beckett No. 1 Standerfer, NE NE NE Sec. 25-7-18w. S.D.O. 1,200 ft.

Bollen-Dillard & Roberts No. 1 Holcomb, NE NE SW Sec. 25-7-19w. S.D. 300 ft.

C. J. Hagerling No. 1 Kimray, SW SW NW Sec. 36-5-18w. T.D. 1,000 ft.; S.D. csg.

Russell S. Tarr No. 1 Kelsay, SW SW NW Sec. 20-7-17w. Pay 1,050-51¼ ft.; F. 70 B.O.P.H. by hds.; est. 1,500 to 2,000 B.O.P.D; S.I.

Lincoln County

Black Gold No. 1 Locquchment, NE NE NE Sec. 28-14-6. T.D. 3,175 ft.; reshot and C.O.; S.S.O.

Cooper Drlg. Co. No. 1 Blaney, SW SW NW Sec. 13-14-5. Prue 3,258 ft.; Bart. 3,748 ft.; T.D. 3,859 ft.; D.&A.

Mason & Nicholls No. 1 Lindsay, SW SE SE Sec. 26-12-3. Wdfd. 5,175 ft.; dolo. 5,428 ft.; T.D. 5,560 ft.; wtr.; D.&A.

W. A. Villines No. 1 Marshall, NW NE NE Sec. 28-15-4. T.D. 5,080 ft.; S.D.

Logan County

Cooper Drlg. et al No. 1 Miller, NW NW SE Sec. 4-17-4w. R.U.R.

Pawnee County

Ed Kelly No. 1 Hill, SW SW SE Sec. 1-21-5. T.D. 2,845 ft.; whipstock 2,840 ft.; drlg. by tools.

Payne County

C. R. Hoagland No. 1 Stanolind, SE SE SW Sec. 27-18-4. Drlg. 2,593 ft.

Pittsburgh County

Phillips Pet. Co. No. 1 Hubacker, C NW NE Sec. 11-7-15. 1st Wlx. 7,514-24 ft.; drlg. 7,712 ft.

Pottawatomie County

Alma Oil Co. No. 1 Johnson, SW NW SW Sec. 19-6-5. 2nd Wlx. 4,025 ft.; T. D. 4,062 ft.; P.B. 3,019 ft.; perf. 2,890-2,900 ft. in Earlsboro; F. 200 B.O.P.D.

F. W. Cooper No. 1 Strawn, SE SE SW Sec. 32-8-5. T.D. 4,411 ft.; S.D.

Sequoyah County

Thompson Bros. No. 1 Ruby, NW NW NE Sec. 30-12-22. Hntn. 1,461 ft.; drlg. 2,130 ft.

Seminole County

Culberson & Shepherd No. 1 Burton et al, SW NW SE Sec. 3-5-5. T.D. 2,668 ft.; F. 240 B.O. in 24 hrs.

Flynn et al No. 1 Work, NE SE SE Sec. 19-8-7. Wlx. 4,276-92 ft.; set pipe.

Stanolind O. & G. Co. No. 1 McMahan, NE NE SE Sec. 12-9-7. Cd. 2,234-41 ft.; rec. sh.

Washita County

Continental Oil Co. No. 1 Proctor, C NW Sec. 28-10-20w. Drlg. 13,183 ft.

John Koberg No. 1-A Harms, C NW NE Sec. 6-10-16w. T.D. 6,000 ft.; tools moved out.

L. B. McWhirter No. 1 fee, NW SW SW Sec. 34-8-19w. T.D. 2,250 ft.; S.D.

SOUTHERN OKLAHOMA

Carter County

Pure Oil Co. No. 1 Noble, NE SE Sec. 35-3s-1e. T.D. 8,500 ft.; P.B. 6,530 ft.; tstd. wtr. at 6,319 ft.; set 7-in. 4,632 ft.; tstd. Hntn. 4,638-4,737 ft.; csg. perf. 11 times with 133 shots at 4,160-4,324½ ft.; swbd. 20 B.O.P.H. and 500,000 cu. ft. gas per day; F. 70 B.O. in 17 hrs.; R.U. to swb.

Choctaw County

Clyde Ross et al No. 1 Hardy, SE SE NW Sec. 21-7s-15. Drlg. L. 1,569 ft.

Marshall County

Hughes et al No. 1 Vittitto, C NE SE Sec. 11-5s-4e. O.W.D.D.; O.T.D. 7,100 ft.; T.D. 7,110 ft.; set plug 4,450 ft.; S. 51 B.F.P.R.

Tillman County

Oil Inv. No. 2 Hammell, NE NW NW Sec. 6-5s-15w. O.W.D.D.; O.T.D. 2,829 ft.; T.D. 3,353 ft.; S.D.

KANSAS

Week Ending July 8 (Descriptions are East unless marked otherwise)-

Atchison County

Earl Wakefield et al No. 1 Natl. Life Ins., C NW NE Sec. 17-6-20. C.O. 200 ft.

Barton County

Armer and Vernon O. & G. Co. No. 1 Hoffman, NW NW SW Sec. 18-16-11w. Tpka. 2,625 ft.; Lans. 3,045 ft.; T.D. 3,217 ft.; 200 ft. O.I.H. in 8 hrs.

B. B. & M. Drlg. Co. No. 1 Esfeld, NW NW SE Sec. 28-16-11w. Lans. 3,055 ft.; T.D. 3,056 ft.

Broswood Oil and Earl Wakefield No. 1 Rule, NW SW NE Sec. 2-16-13w. Lans. 3,103 ft.; drlg. 3,342 ft.

J. A. Brouk et al No. 1 Pospishel, NE NE SE Sec. 20-17-15w. Tpka, 3,010 ft.; Arb. 3,548 ft.; T.D. 3,564 ft.; S. 3 B. O.P.H.

R. E. Day et al No. 1 Feltes, SE SE NE Sec. 14-16-12w. O.W.D.D. O.T.D. 1,875 ft.; S.D. 3,342 ft.

Butler County

Carey & Jennings No. 1 Kelly, C SW Sec. 20-27-4. Drlg. 2,300 ft.

Elbar Corp. No. 1 Martin, NE SE SE Sec. 34-26-7. S.S.O. 2,600-05 ft.; T.D. 2,703 ft.; 200 ft. W.I.H.; S.D.O.

G. S. Lucas and White Star Oil No. 1-A Lucas, NE NW NW Sec. 14-28-6. Drlg. 920 ft.

Comanche County

Kerr-Lynn et al No. 1 McMoran, C SE NW Sec. 25-34-16w. Drlg. 2,973 ft.

Cowley County

Eason Oil Co. No. 1 Muret, SE SE NE Sec. 25-33-3. Drlg. 1,098 ft.

Hartman & Blair No. 1-A Brown, SE SE NW Sec. 33-30-4e. Arb. 3,279-80 ft.; T. D.; drlg. cmt.

J. R. Lowell et al No. 1 Olsen, NE NE SE Sec. 13-35-7. M.I. mch.

E. J. Shaffer, Inc., No. 1 Starlin, NE NE SW Sec. 27-30-4. M.I.M.

Western Kans. O. & R. Co. No. 1 Gregory, SE SE NW Sec. 2-34-6. Rig.

Dickinson County

Franks et al No. 1 Huffman, NW NW SW Sec. 11-13-1. Hntn. 2,807 ft.; T.D. 2,816 ft.; U.R. 5-in.

Douglas County

Three Star Oil Co. No. 1 Griffith, C NW SE Sec. 4-14-8e. M.I.M.

Ellis County

Central Pet. No. 4 Hadley, NE NE SE Sec. 12-11-18w. Lans. 3,054 ft.; Arb. 3,353-58 ft., T.D.; depthograph pot. 2,221 B.O.; comp.

K. F. Nelson No. 1 Novak, NW NW NE Sec. 36-13-16w. Tpka. 2,821 ft.; S.O. 2,925 ft.; Lans. 3,085 ft.; C.O. 3,094 ft.

Ellsworth County

I. W. Murfin No. 1 Loula, NW NW SE Sec. 28-16-10w. Tpka. 2,620 ft.; Lans. 2,970 ft.; gas 3,005-45 ft.; Arb. 3,282-90 ft., T.D.; 900 ft. O.I.H.

I. W. Murfin No. 1 Zajic, C S½ SW NE Sec. 31-16-10w. Rig.

Geary County

Scheu & Tague No. 1 Ave. NW SW NW Sec. 10-12-8. T.D. 1,938 ft.; U.R.

Gray County

Champlin Ref. No. 1 Dirks, C NE SW Sec. 34-28-29w. S.D. 5,525 ft.

Greenwood County

James Enright et al No. 1-A Schwab, SE SW SE Sec. 9-24-10. Drlg. 650 ft.
Austin Reed et al No. 1 Sowder, SE SE NW Sec. 31-25-13. T.D. 1,597 ft.; P. 25 B.O.P.D.; comp.
G. L. Sheedy No. 1 fee, C E½ NE NW Sec. 13-25-12. Drlg. 635 ft.

Harvey County

Western Kans. O. & R. Co. et al No. 1 Mooreshead, SW SW SW Sec. 24-23-1w. Lans. 2,315 ft.; Miss. 2,973 ft.; drlg. 3,387 ft.

Haskell County

United Prod. No. 1 Illinois, NW NW SE Sec. 31-29-34w. Gas 2,614 ft.; T.D. 2,737 ft.; ga. 31,000,000 cu. ft.; comp.

Kingman County

Skelly Oil Co. No. 1 Miller, CSL N½ NE Sec. 31-27-10w. Cellar.

Kiowa County

Sinclair Prairie No. 1 Price, NW NW SW Sec. 22-28-20w. Miss. 4,910 ft.; Arb. 5,538 ft.; cg. 5,606 ft.

Marion County

Tide Water Asso. and Ward McGinnis No. 1 Junghanns, SE SE SE Sec. 23-18-5. Lans. 1,576 ft.; L. Simp. 2,204 ft.; Arb. 2,226 ft.; T.D. 2,303 ft.; D. &A.

Miami County

Dave Judd No. 1 Waite, CNL SW SE Sec. 4-15-25. S.D. 732 ft.

Osage County

J. M. Edwards No. 1 Detrick (O.W.D.D.), C NW SE Sec. 21-14-15. O.T.D. 1,200 ft.; S.G. in sh. 1,618-24 ft.; S.D. 1,640 ft.

Pratt County

Skelly Oil Co. No. 1 Royse, C SW Sec. 9-28-11w. B.R.R.

Reno County

Herndon Drlg. Co. No. 1 Compton, CEL SE NW Sec. 31-25-10w. Drlg. 1,540 ft.

Rice County

Bradley Oil No. 1 Ruhl, C E½ NE NW Sec. 24-19-10w. Arb. 3,316 ft.; S.S.O. 3,316 ft.; T.D. 3,352 ft.; D.&A.
Bridgeport Mch. No. 1 Pierce, CSL N½ NE Sec. 29-20-7w. Miss. 3,305-07 ft., acd. but no ind.; drlg. 3,695 ft.
Carey et al No. 1 Link, SW NW SE Sec. 19-19-9w. Lans. 2,923 ft.; S.S.O. 3,004 ft.; T.D. 3,287 ft.; acd. and S. 4 B.O. P.H.
Finston & Co. et al No. 1 Hathaway, CNL NW SW Sec. 27-19-10w. T.D. 3,050 ft.; F. 812 B.O. in 8 hrs.; pot. 2,436 bbl.; comp.
Fred Jones No. 1 Habiger, NE NE SW Sec. 9-18-10w. Lans. 2,948 ft.; congl. 3,245 ft.; drlg. 3,261 ft.
Frank Hollow et al No. 1 Guldner, SE SE SE Sec. 5-18-9w. Drlg. 1,594 ft.
Nelson Drlg. Co. No. 1 Hodge, NW NW NE Sec. 25-20-6w. Lans. 2,890 ft.; Miss. 3,301-03 ft.; T.D. 3,336 ft.; P. 147 B.O. in 8 hrs.; pot. 442 B.O.; comp.
Phoenix Drlg. No. 1 Linville, SW SW SE Sec. 4-20-10w. Drlg. 1,720 ft.
E. J. Shaffer No. 1 Bauer, C W½ SW SW Sec. 23-21-7w. R.U.S.T. 3,398 ft.
Skelly Oil Co. No. 1 Bernstorf, CSL SE SE Sec. 22-19-10w. Drlg. 825 ft.
C. H. Weaver No. 1 James, NE NW SW Sec. 25-19-10w. Drlg. 1,320 ft.

Rooks County

Broadview Oil No. 1 Baxter, NE SW SW Sec. 35-8-16w. Drlg. 1,885 ft.

Russell County

Braden & McClure No. 1 Blehm, SW SW NW Sec. 11-14-14w. S.O. 2,530-35 ft.; S.G. 2,670-80 ft.; drlg. 2,945 ft.
Central Pet. No. 1 Crisman, SW NW NE Sec. 20-14-14w. Drlg. 465 ft.
Phillips Pet. No. 1 Maier, SW SW NE Sec. 15-15-14w. Lans. 3,002 ft.; Arb. 3,249 ft.; sat. in core 3,250-57 ft., T.D.; R.U.S.T.
Shell Oil Co. No. 1 Berrick, NW NW SE Sec. 13-15-13w. Drlg. 2,631 ft.
A. H. Witt No. 1 Speere, SW SW NE Sec. 7-14-14w. Drlg. 1,440 ft.

Sherman County

Goodland Ind. Gas Co. No. 1 Wilcoxson, SE NW Sec. 27-8s-39w. T.D. 1,100 ft.; est. 25,000 cu. ft. gas.

Stafford County

Stanolind O. & G. No. 2 Sittner, NE SW SW Sec. 3-22-12w. Arb. 3,630-35 ft., T.D.; R.U.S.T. 3,635 ft.
Virginia Drlg. No. 1 Tieperman, NE NE SW Sec. 29-21-12w. Drlg. 2,440 ft.

Woodson County

Roby et al No. 1 Meairs, SW SW NW Sec. 21-25-14. Bvlle. 1,367-70 ft.; S.O.; S.D.

MISSOURI

Andrew County

Bradley Bros. et al No. 1 Gee, NW NW SE Sec. 28-60n-35w. S.O. in Bart. 995 ft.; drlg. 1,080 ft.
Jones & Hyde No. 1 Holt, SE NW NE Sec. 34-60-35w. S.D. 742 ft.

Bollinger County

Delmund Oil No. 1 Cooper, SE SE SE Sec. 14-29-9e. Drlg. 1,450 ft.

Butler County

Coastal Pet. et al No. 1 Pierson, SW NE NW Sec. 27-22-6e. T.D. 131 ft.; drlg. cmt.

Clay County

Eastern Drlg. Co. No. 1 Williams, NW NW NE Sec. 28-53-32w. S.S.O. 475-80 ft.; gas 595 ft.; S.D. 910 ft.

Clinton County

C E King et al No. 1 Willis, NE SE SE Sec. 13-55n-32w. Miss. 895 ft.; drlg. 1,600 ft.

DeKalb County

Geo. W. Moore No. 1 McQuate, NE SW SW Sec. 11-57n-31w. Miss. 1,075 ft.; drlg. 1,340 ft.

Hickory County

J. W. Sims No. 1 Wilson, NW NW NW Sec. 3-37n-21w. Drlg. 1,634 ft.

Holt County

Brin & Nathan No. 1 Decker, C NW NW Sec. 1-61-38w. Spd. and S.D.
Brin & Nathan No. 1 Garrett, C NE NE Sec. 1-61n-38w. Loc.
Markham et al No. 1 Gaffney, SW SE SW Sec. 24-63-40w. R.R.
J. H. Everitt et al No. 1 Spring, SW SW SE Sec. 30-62-38w. Drlg. 2,700 ft.

Jackson County

Missouri Valley G. & O. Co. No. 1 Young, SW NW NE Sec. 30-51-34w. S.S.O.&G. 940 ft.; Miss. 1,034 ft.; drlg. 1,115 ft.

Livingston County

Bradley Bros. No. 1 Minning, SE SE NW Sec. 22-58-23w. Fsg. 380 ft.

Mercer County

Geo. W. Moore No. 1 Castell, NE NE NE Sec. 32-65-24w. Loc.
Geo. W. Moore No. 1 Moss, NW SW SE Sec. 30-65-24w. Drlg. 501 ft.

Platte County

Berry Bros. No. 1 Rule, C SW SW Sec. 20-53-33w. Bvlle. 812-914 ft.; Burgess 958-61 ft.; Hntn. 1,442 ft.; drlg. 1,478 ft.

Putnam County

E. F. Slater et al No. 1 Sayer, NE NW SE Sec. 14-65-18w. St. Peter sd. 1,375-1,525 ft.; showed fresh wtr.; Arb. L. 1,608 ft.; S.D. 1,665 ft.

Schuyler County

T. E. Baldwin No. 1 May Johnson, NW NE NE Sec. 21-65-15w. Mch.

Shelby County

Wright & Turner No. 1 Turner, C NW NW Sec. 27-59n-9w (wildcat). S.D. 215 ft.

Sullivan County

H. V. Elwell No. 1 Taylor, CNL S½ S½ Sec. 12-62-21w. Moving in tools.

NEBRASKA

Cass County

Golden Rod Oil Co. No. 1 Sparer, SE SE SE Sec. 8-11-13e. S.D. 785 ft.

Hitchcock County

C. L. Price No. 1 Carter, SE NE SW Sec. 35-2n-32w. Lans. 3,976 ft.; drlg. 4,000 ft.

Scotts Bluff County

J. A. Fairy Pet. Corp. No. 1 McCully, C SE SE Sec. 35-23n-58w. Set 6-in. 1,407 ft.; S.S.O. 1,515 ft.; drlg. 1,650 ft.
Albert Wood No. 1 McHenry, SE NE NE Sec. 33-23n-57w. T.D. 625 ft.; C.O.

ARIZONA

Maricopa County

Sam F. Reaves No. 1 Fuqua, NW NW NE Sec. 34-1n-4w. Drlg. 2,082 ft.; ran Schlumberger which showed total of 310 ft. porous sand in 3 zones; will drill deeper.
Peoples G. & O. Co. No. 1 Gardner, SE Sec. 2-1n-3e. Spudded 18-in. hole.

Cochise County

Funk Dev. Co. No. 1 fee, SE NE Sec. 27-13s-30e. Cg. 6,596 ft., agglomerate and volcanic tuff.

Apache County

Rincon Drlg. Synd. No. 1 State, N½ NW NE Sec. 28-13n-27e. Drlg. 400 ft.

Pima County

R. W. Schenck No. 1 Boyce, Sec. 22-19s-17e. S.D. 400 ft.

Yavapai County

Ari-Copa Drlg. & Mining Co. No. 1 Puntenney, SW¼ Sec. 27-18n-2w. Drlg. hd. limestone at 140 ft.
China Valley Oil Dev. Co. No. 1 State, Sec. 20-18n-2w. Last report T.D. 890 ft.

GEORGIA

Clinch County

Georgia Resources, Inc., No. 1 Gillican, Dist. No. 4 (formerly Reynard Oil Co.). S.D. 259 ft.

Pierce County

Donald Clark et al No. 1 Adams, Dist. No. 4. Drlg. 1,928 ft.

ARKANSAS

Bradley County

Amerada Pet. Corp. No. 1 Bradley Lbr. Co., 660 ft. N, 460 ft. E, SW cor. SE NE Sec. 14-17-10. R.U.

Columbia County

Ark. Fuel Oil Co. No. 1 Glasgow-Crisp, 603 ft. N, 605 ft. W, SE cor. NE SW Sec. 23-17-20. Drlg. 7,889 ft.
Arkansas Fuel Oil Co. No. 1-C D. Glasgow, C NW SW Sec. 23-17-20. Set 9⅝-in. csg. 2,207 ft.; W.O.C.
Atlantic Ref. Co. No. 1 J. A. Foster, C NW NE Sec. 24-17-20. T.D. 4,026 ft.; P.B. 3,195 ft.; drlg. 6,312 ft.
Atlantic Ref. Co. No. 1 Pine Woods Lbr. Co., C NE NE Sec. 16-18-22. Set 9⅝-in. csg. 4,102 ft.; drlg. 6,410 ft.
Atlantic Ref. Co. No. 1 L. Spain, C SW SW Sec. 18-17-19. Drlg. 4,012 ft.
Lion Oil Ref. Co. No. 1 Tissue, C SW NW Sec. 15-18-19. T.D. 7,090 ft.; fsg. 10 jts. D.S. 3,000 ft.
Mid-Continent Pet. Corp. No. 1 Foster, C NE NW Sec. 24-17-20. Drlg. 4,209 ft.
Oliphant Oil Co. No. 1 J. Jones, C SE SE Sec. 16-17-20. Set 13⅜-in. csg. 120 ft.
Phillips Pet. Co. No. 1 J. A. Joiner, C SE NE Sec. 22-17-20. Drlg. 7,206 ft.
Phillips Pet. Co. No. 1 L. A. Longino, C SW SE Sec. 15-17-20. T. Smkvr. L. 7,390 ft.; comp.; 19 B.O.P.H.; T.D. 7,740 ft.
Placid Oil Co. No. 1 R. A. Couch, C NW NW Sec. 19-17-19. T.D. 7,525 ft.; 7-in. 7,575 ft.; drlg. plug.
Shell Pet. Corp. No. 1 Peoples Bnk. of Columbia, C NW SW Sec. 24-17-20. Comp.; 27 B.O.P.H.; T.D. 7,614 ft.
Southwood Oil Co. No. 2 Foster, C SE NE Sec. 24-17-20. Drlg. 2,873 ft.
Southwood Oil Co. No. 1 D. Glasgow et al, C NE NE Sec. 22-17-20. Drlg. 3,756 ft.
Standard Oil Co. of La. No. 1-B Lewis Unit, 660 ft. SW cor. NE NE Sec. 15-17-19. T.D. 2,469 ft.; set 9⅝-in. csg. 2,450 ft.; drlg. 5,245 ft.
Twin City Syndicate No. 1 J. H. Hollensworth, 1,320 ft. E, 660 ft. S NW cor. SW¼ Sec. 31-17-18. Set 13⅜-in. csg. 148 ft.; T.D. 196 ft.
G. H. Vaughn No. 2 J. Jones, C SE NE Sec. 21-17-20. Drlg. 4,019 ft.
G. H. Vaughn No. 1 L. Paschal, C SE NW Sec. 22-17-20. Drlg. 6,837 ft.

Craighead County

Tanmark, Inc., No. 1 R. M. Martin, Sec. 35-14-3e. Drlg. 2,619 ft.

Lafayette County

East Texas Ref. Co. et al No. 1-B Patten, C S½ NE NE Sec. 24-16-24. Set 10¾-in. csg. 112 ft.; W.O.C. 130 ft.
East Texas Ref. Co. et al No. 1 Warren Est., C N½ NE NW Sec. 24-16-24. Set 10¾-in. csg. 1,210 ft.; cd. 3,320-40 ft., 5 ft. ool. L., S.O., rest bl. sh. and limy sh.; drlg. 3,687 ft.
Standard Oil Co. of La. No. 6 McKean, 660 ft. NE cor., SE SW Sec. 7-16s-22w. T. Smackover L. 7,201 ft.; T. soft L. 7,205 ft.; stuck D.S.; fsg.
J. C. Stephens No. 1 J. A. Allen, C N½ NW NW Sec. 30-16-23. Set 10¾-in. csg. 112 ft.; W.O. 115 ft.

Little River County

C. & M. Drlg. Co. No. 1 Strawn, SW cor. SE Sec. 20-10-32. Cd. 1,270-80 ft.; sh.& wtr. sd.; reported S.O. 1,365-70 ft.; 1,542-64 ft. sd. and 1,564-74 ft. sdy. L.; cor. T.D. 1,598 ft.; set 7-in. csg. 1,590 ft. (cor.); T.D. 1,750 ft.; S.D.

Lonoke County

Cabot Drlg. Club, Inc., No. 1 Benson townsite, Sec. 18-4n-9w. Reported S.O. 1,400-50 ft.; hole clean; ran survey to 2,573 ft.; P.B. 1,470 ft.; set 4½-in. csg. 1,390 ft.; T.D. 1,470 ft.; W.O.

Miller County

Vacarro & Waterman No. 1 Westbrook, C SW SW Sec. 1-20-28. T. por. L. 6,165 ft.; set 5½-in. csg. 6,164 ft.; acidized with 3,500 gal.; swbd. 2 B.P.H. until swbd. dry; S.D.W.O. 6,192 ft.

Ouachita County

J. E. Crosbie, Inc., No. 2 F. A. Laney, Sec. 36-15-16. Stk. 5½-in. 2,777 ft.; set 966 ft. at 2,777 ft.; W.O.C.; T.D. 2,832 ft.; perf. 2,678-82 ft.; tstd. est. 2,000 ft. S.W.; P.B. 2,550 ft.; drld. out to 2,626 ft.; reperf. csg. 2,570-82 ft.; S.W.; reperf. csg. 2,586-96 ft.; pmpd. S.W.; P.B. 2,420 ft.; perf. 2,282-88 ft.; pmpg. 150 B.P.D. fluid, incl. 5 bbl. oil; arng. recement.
Phillips Pet. Co. No. 1 J. D. Reynolds, 330 ft. SE cor. SE NW Sec. 27-15-15. O.W.W.O.; O.T.D. 4,926 ft.; comp. as disc. well, Snow Hill field; perf. csg. 2,732-35½ ft., 2,728-31½ ft., 2,744-47½ ft., and 2,756-60 ft.; est. 2,300 ft. F.I. H., 1% oil; P.B. 2,770 ft.; set cmt. retainer 2,719 ft.; sqzd.; S.D.; W.O. 2,746 ft.

Pike County

Bruce E. Wallace No. 2-A Glenn Tilyeu, 320 ft. N, 330 ft. W SE cor. Sec. 26-8s-24w. Set 6-in. csg. 385 ft.; reported S.O. 400 ft.

Union County—Schuler

E. M. Jones No. 1-C Murphy Ld. Co., Sec. 24-18-18. Cd. Jones sd. 7,560 ft.; T.D. 7,640 ft.; set 7-in. csg. 7,620 ft.; perf. 7,560-85 ft.; swbd. S.W.; recmtd. csg. 7,544 ft.; perf. 7,562-83 ft.; swbg. to test.
Lion Oil Ref. Co. No. 1 S. Bessie, C S½ Lot 5, NW Sec. 7-18-7. 10¾-in. csg. 1,935 ft.; drlg. 5,219 ft.
Lion Oil Ref. Co. No. 2 Clay, 330 ft. N, 660 ft. W, SE cor. NE SW Sec. 12-18-18. T. Jones sd. 7,629 ft.; 7-in. csg.; T.D. 7,713 ft.
Lion Oil Ref. Co. No. 1 S. Frank, C S½ SW NE Sec. 12-18-18. Fsg. D.S. 6,727 ft.
Lion Oil Ref. Co. No. 1 S. John, SE cor. SE NE Sec. 12-18-18. T. Jones sd. 7,577 ft.; 7-in. csg. 7,650 ft.; T.D. 7,675 ft.
Phillips Pet. Co. No. 1 Mill, NW cor. S½ Lot 4, SW Sec. 18-18-17. T. Jones sd. 7,547 ft.; 7-in. csg. 7,687 ft.; T.D. 7,700 ft.

Union County—Other

S. S. Alexander No. 1 J. P. Pickering, C NW NW SW Sec. 31-16-15. Cd. 2,151-52 ft.; soft por. sat. sd., salty taste; D.S.T. S.S.W.; cd. 2,152-56 ft.: rec. 2 ft. por. S.W. sd.; cd. 2,490-2,510 ft., gr. shaly sd. and hd gr. sd.; S.D., rig repair 2,540 ft.
Bob Milam No. 1 Primm Est., SE cor. Lot 5, NE Sec. 1-16-16. S.D. 2,359 ft.
Sam Sebersky No. 3 J. N. Jerry, Sec. 21-17-14. Cd. 2,701-13 ft.; set 5½-in. csg. 2,718 ft.; drlg. wtr. sd. 2,516 ft.; P.B. 2,665 ft.; perf. 2,706-09 ft.; swbd. S.W.; S.D.W.O. 2,718 ft.

NORTH MISSISSIPPI

Clarke County

Jeremiah L. Ryan et al No. 1 M. Eddins, 500 ft. SE cor. Sec. 29-2n-14e. S.D. 1,502 ft.

Hinds County

Tatum et al No. 1 S. F. Johnson, NE cor. Sec. 29-6n-1w. S.D. 5,218 ft. sd.; arng. D.D.; erecting 122-ft. drk; sdtrkd. hole at 4,370 ft.; S.D. 6,500 ft.; P.B. 3,337 ft.; perf. csg. 3,330-21 ft.; swbd. S.W.; abd.

Humphreys County

Union Prod. Co. No. 1 C. B. Box, Sec. 15-14n-4w. Drlg. 4,143 ft.

Lafayette County

Adams O. & G. Co. No. 1 Lewellen, Sec. 9-10s-1w. Drlg. sh. 1,230 ft.

Prentiss County

Home Dev. Co. No. 1 Allen, Sec. 8-7s-9e. Drlg. L. 875 ft.; no report.

Simpson County

Cleve Love No. 1 N. E. Garner, SW cor. SW NE Sec. 1-10n-17w. S.D. 3,145 ft.

LOUISIANA

N. LOUISIANA WILDCATS

Bienville Parish

Ark. La. Gas Co. No. 2 Gayoso, 660 ft. SW cor. SE Sec. 14-16-10. T. Tr. Pk. 5,432 ft.; D.S.T. 5,796-5,805 ft. tstd. dry in 26 min.; set 8⅝-in. csg. 6,300 ft.; T.D. 8,319 ft.; set csg.; per. 8,285-8,314 ft.; flwd. est. 2,000,000 cu. ft. gas and sprayed S.W.; acdzd. with 6,000 gal. and tstd. est. 4,000,000 cu. ft. gas and spray S.W.; perf. 8,110-70 ft. and 8,306-12 ft.; flwd. 39 bbl. dist., 16 bbl. S.W. and 1,500,000 cu. ft. gas on ¼-in. ck.; acdzd. with 2,000 gal. and tstd. same; R.P. 2,818 lb.; drlg. sh.&L. 8,407 ft.; D.S.T. 8,310-8,404 ft.; tstd. 750 ft. mud cut with gas in 1 hr. 47 min.; drlg. 8,491 ft.
Ark. La. Gas Co. No. 1 Long Bell Mineral Co., NW cor. NW¼ Sec. 14-16n-10w. Loc.
Hunt Oil Co. No. 1 T. A. Loe, C NE Sec. 2-16-6. Comp.; 4,200,000 cu. ft. gas.

Bossier Parish

H. M. Harrell et al No. 1 Thompson Unit, 70 ft. NW, C SE Sec. 20-17-11. Drlg. 4,500 ft.

Caddo Parish

J. G. Bailey No. 2 Muslow, 672 ft. S, 396 ft. W, NE cor. SE NW Sec. 17-20-15. O.W.D.D.; O.T.D. 2,198 ft.; W.O.C. 2,196 ft.
Frank G. Bandein No. 1 Caddo Levee Bd., 150 ft. S, 350 ft. W, NE cor. NW SE Sec. 26-21-16. Drlg. 810 ft.
Burton & Harlan No. 1-A Perche, 500

ft. S, 747 ft. E, C Sec. 1-20-16. Set 10-in. 60 ft.; W.O.C. 1,535 ft.

Drillers, Inc., No. 1 Ellerbe, SW cor. Sec. 23-18-14. Set 5½-in. csg. 5,554 ft.; acdzd. with 3,500 gal. and tstd. 1,500 ft. O.I.H.; comp.; 75 bbl.; 5,560 ft.

East Texas Ref. Co. No. 1 Alkins, SW SE Sec. 5-23n-13w. Drlg. 2,600 ft.

East Texas Ref. Co. No. 2 Alkins, Sec. 4-23n-15w. Drlg. 3,800 ft.

W C. Feazel and Eagle Prod. Corp. No. 1 Caddo Mercantile Co., 2,310 ft. W, 955 ft. S, NE cor. Sec. 5-23-15. Drlg. 3,100 ft.

M. M. Ferrell No. 1 Satterwhite, SE NW Sec. 10-20-16. Set 6-in. csg. 1,335 ft.; tstd. S.W.; S.O. 1,580 ft.; acdzd. with 3,000 gal.; tstd. S.W.; S.O.; S.D. 2,010 ft.; rng. 4½-in. csg. 2,263 ft.; abd. 2,263 ft.

H. Fotiades No. 1 Bath, S of NW cor. Sec. 3-17n-15w. R.U.

Harry Fotiades No. 1 Furman, 393 ft. S, 870 ft. E NW cor. NE Sec. 35-18-14. Set surf. csg. 297 ft.; drlg. 2,050 ft.

H. Fotiades No. 1 Sokoloski, S of NE Sec. 35-18n-14w. Drk.

Hamilton & Stone No. 1 Atlanta, 500 ft. S, 244 ft. W, NE cor. NW Sec. 2-20-16. Set 6-in. csg. 1,701 ft.; T.D. 1,701 ft.; acdz.

J. M. Harper No. 1 Walker, 453 ft. E. 510 ft. S NW cor. Sec. 28-18-14. Drlg. 860 ft.

Hurricane Pet. Co. No. 2 De Soto Corp., W of NE cor. Sec. 26-18n-14w. R.U.

L. & A. Oil Co. No. 3 Burton, 1,163 ft. E, 979 ft. S, NW cor. Sec. 7-20-15. Drlg. 450 ft.

Linham & Jones No. 3 fee, E of NW cor. Sec. 21-20n-15w. R.U.

C. H. Lyons et al No. 1 Agurs, 760 ft. N, 710 ft. W, SE cor. Sec. 34-18-14. Set 9⅝-in. csg. 1,302 ft.; drlg. 5,230 ft.

W. W. McDonald No. 1 Burton, 300 ft. S, 550 ft. E, NW cor. NW NW Sec. 7-20-5. Drlg. 1,366 ft.

Natal Oil Co. No. 5 Stiles, 400 ft. NE cor. NW NW Sec. 27-21-16. Set 7-in. csg. 1,020 ft.; T.D. 1,024 ft.; comp.; 25 bbl.

Natal Oil Co. No. 6 Stiles, 1,120 ft. E, 150 ft. N, SW cor. Sec. 22-21-16. Set 7-in. csg. 1,031 ft.; comp.; 25 bbl.; 1,036 ft.

J. Ober & Sons No. 2 fee, 920 ft. N, 200 ft. W, C Sec. 36-2-16. W.O.C. 2,275 ft.

Oblinger & Ritter No. 3 Boisseau, 1,220 ft. N, 1,310 ft. E, SW cor. SE Sec. 34-21-16. S.D. 820 ft.

Red Iron Drlg. Co. No. 1 Agurs, 1,900 ft. S, 715 ft. E, NW cor. Sec. 25-18-14. 9⅝-in. csg. 1,462 ft.; drlg. 3,485 ft.

John Schmidt No. 2 Sproull, 970 ft. N, 570 ft. W, SE cor. Sec. 32-20-16. Tstd. S.W. 1,654 ft.

Seymour Oil Co. No. 1 Hughes et al. 330 ft. NE cor. NW Sec. 15-20-15. Drlg. 1,900 ft.

Simplex Oil Co. No. 12 Youree, C SW SE Sec. 13-20-15. Drlg. 1,220 ft.

Stanolind O. & G. Co. No. 1, 131 Dillon Hrs., C SE NE Sec. 14-21-15. Set 16-in. csg. 494 ft.; 10¾-in. csg. 4,520 ft.; cd. oil sd. 3,912-20 ft.; 3,922-26 ft., and 3,941-45 ft.; D.S.T. 3,900-47 ft.; tstd. 170 ft. mud; S.O. 400 ft. S.W. 7 min.; ⅝-in. ck.; drlg. 4,147 ft.

Joe Strahan No. 2 Hart, 1,208 ft. N, 320 ft. E, SW cor. Sec. 29-21-16. Set 6-in. csg. 2,214 ft.; comp.; 90 bbl.; 2,404 ft.

Joe Strahan No. 2 Stiles, 3,658 ft. N, 1,050 ft. E, SW cor. Sec. 29-21-16. Drlg. 1,900 ft.

Joe G. Strahan No. 2-A Stiles, 4,165 ft. N, 473 ft. E, SW cor. Sec. 29-21-16. R.U.

Texas Co. No. 53 C. M. L. Co., Sec. 23-21-15. Set 6⅝-in. csg. 1,485 ft.; W.O. S.R. 1,635 ft.

Caldwell Parish

Critchett & Woods (formerly E. T. Oakes) No. 1 Kyles, NE cor. SW NE Sec. 18-11-3e. S.D. 2,476 ft.; W.O.

Catahoula Parish

Ross Morel et al No. 1 Ballard Est., 330 ft SE cor. SE SW Sec. 8-9n-7e. Drlg. 1,415 ft.

De Soto Parish

Daniel Murray No. 1 Russell, 50 ft. N, 500 ft. W, SE cor. NE NW Sec. 12-11-16. O.W.D.D.; O.T.D. 2,046 ft.; T.D. 2,166 ft.; side-wall coring.

Roosth & Genecov Prod. Co. No. 1 Woolums, 990 ft. S, 330 ft. E NW cor. SW¼ Sec. 29-12-12. Set 10-in. 80 ft.; W.O.C.

C. H. Tuttle No. 2-A Wemple, E NW cor. SW¼ Sec. 14-12n-11w. Loc.

La Salle Parish

G. C. Walsenham No. 4 Dean, 300 ft. W No. 3, Sec. 23-9n-1e. Set 6⅝-in. csg. 1,627 ft.; T. sd. 1,628 ft.; W.O.S.R. 1,631 ft.

Sabine Parish

Ed Bailey No. 1 Hale, 330 ft. NW cor. NE NW Sec. 6-7-12. Set 10-in. csg. 60 ft.

Geo. Ellis No. 1 Walker, 500 ft. NW cor. NW SE Sec. 8-4-12. Set 12½-in. csg. 276 ft.; reported S.O. 2,180 ft. and 2,263-65 ft.; rng. csg. 2,269 ft.; cd. sdy. sh. 2,265-69 ft.; set 7-in. csg. 2,250 ft.; S.D. rig repair 2,790 ft.

Okla.-Tex. Tr. No. 2 Frost Lbr. Ind., 330 ft. SE cor. NE SW Sec. 22-9-13. Set 12½-in. csg. 84 ft.; 8-in. csg. 1,568 ft.; T. clk. rk. 1,568 ft.; S.D. 1,699 ft.

K. R. Phillips No. 1 Craig, 335 ft. S, 330 ft. E NW cor., SE Sec. 22-9-13. Drlg. 800 ft.

Potter et al No. 2 Ebarb, NW cor. NE SE Sec. 4-7n-13w. R.U.

W. M. Quick No. 1 Sabine, SE cor. NE NE Sec. 8-7-13. Tstd. S.O. 2,397 ft.; drlg. 3,458 ft.

H. M. Sneed No. 1 Leone, SW cor. NW SE Sec. 8-7-13. T.D. 1,962 ft.; W.O.C. 2,020 ft.

Spier & Chestnut No. 1 De Soto Corp., NW cor. SE NE Sec. 27-10n-13w. Loc.

Sutton-Zwolle Oil No. 4 Bowman-Hicks Lbr., NW cor. NW SE Sec. 24-7n-14w. Loc.

A. Tillman No. 1 Ritter, 400 ft. NE cor. SE SW Sec. 26-8-12. S.D. 1,900 ft.

J. A. Williams No. 1 Long Bell Lbr. Co., 250 ft. S. 550 ft. W, C Sec. 33-8-14. Drlg. 1,940 ft.

Tensas Parish

Continental Oil Co. No. 1 Cammack, 1,690 ft. S, 330 ft. W, NE cor. Sec. 31-13-12e. Set 10¾-in. csg. 1,623 ft.; T. salt 4,124 ft.; cg. salt 4,135 ft.

Webster Parish

Geo. Barham No. 1 A. J. Hodges, 1,916 ft. N, 728 ft. E, SW cor. Sec. 23-21-10. O.T.D. 4,574 ft.; jnkd. hole; skdd. 75 ft. N and spdd. new hole; 9⅝-in. csg. 1,275 ft.; drlg. 4,065 ft.

Hunt Oil Co. No. 1 Coffee, C SW NW Sec. 19-21-9. Drlg. 5,885 ft.

Hunt Oil Co. No. 30 Hope, 100 ft. W, C NE SW Sec. 30-21-10. Drlg. 3,945 ft.

Hunt Oil Co. and Magnolia Pet. Co. No. 1 Gray-Cox, SW cor. Sec. 19-21-9. W.O.C. 8,416 ft.

Hunt Oil Co. No. 1 Stewart, NW SE Sec. 32-21-10. Set 9⅝-in. 5,672 ft.; T. Cotton Valley 8,074 ft.; T. "D" sd. 8,450 ft.; light O.S.; T. Bod. 8,547 ft. (cuttings); W.O.C. 8,783 ft.

Magnolia Pet. Co. No. 1 Roseberry Unit, 20 ft. N and W. C SE Sec. 29-23-9. Pipe stck. 7,788 ft.

Ohio Oil Co. No. 6 Bodcaw, Acct. 4, 660 ft. NE cor. NW Sec. 13-21-10. Holloway sd. 5,773-79 ft.; 9⅝-in. csg. 5,767 ft.; T.D. 5,855 ft.; S.D.W.O. 5,855 ft.

Oliphant Oil Corp. No. 2-A Hodges, 660 ft. W, 460 ft. S, NE cor. Sec. 3-20-10. Drlg. 5,465 ft.

O. F. Shaver No. 1 Stewart, 150 ft. S, 563 ft. E, NW cor. SW NE Sec. 4-18-10. Drlg. 1,610 ft.

Stanolind O. & G. Co. No. 2 Pardee, Sec. 25-21-10. Drlg. 5,181 ft.

Union Prod. Co. No. 1 Walker Unit, 50 ft. S, C SE Sec. 30-18-8. Set 9⅝-in. csg. 6,490 ft.; T. Pettit 6,665 ft.; T. Tr. Pk. 6,910 ft.; T.D. 10,383 ft.; tstg. S.S. G.; P.B. depth 5,775 ft.

SOUTH LOUISIANA FIELDS

Abbeville—Vermilion Parish

Continental Oil Co. No. 1 Alfred Boudoin, Sec. 58-12s-3e. Drlg. sh. 8,320 ft.

Continental Oil Co. No. 1 David Meaux, Sec. 9-12s-3e. Drlg. sh. 5,910 ft.

Continental Oil Co. No. 1 Franciol, Sec. 67-12s-3e. Drk.

Continental Oil Co. No. 1 Lucion Duhon, Sec. 17-12s-3e. T.D. 10,762 ft.; 7-in. csg. 10,316 ft.; P.B. 10,201 ft.; cd. sd., S.O. &G. 10,112-70 ft.; perf. csg. 10,140-55 ft.; rec. mud and gas; perf. csg. 10,159-60 ft.; set cmt. retainers; W.O.C.; perf. csg. 10,159-65 ft.; I.P. 4 B.P.H.; ½-in. ck.

Bancroft—Beauregard Parish

Republic Prod. Co. No. 7 Lutcher Moore, Sec. 14-6s-13w. T.D. 8,000 ft.; 5½-in. csg. 7,963 ft.; oil sd. 7,901-08 ft.; perf. csg. 7,898-7,900 ft.; tstd. S.W.; perf. csg. 7,896-98 ft.; tstd. oil and S.W.; perf. csg. 7,510-20 ft.; tstg.

Republic Prod. Co. No. 8 Lutcher Moore Lbr. Co., Sec. 14-6s-13w. Cg. sh. 7,210 ft.

Republic Prod. Co. No. 1 Nettie Smith Sec. 15-6s-13w. Loc.

Bateman Lake—St. Mary Parish

Texas Co. No. 2 State-Bateman Lake, Sec. 21-16s-12e. 13⅜-in. csg. 1,700 ft.; T.D. 9,453 ft.; sdtrkd. 6,880 ft.; drld. into old hole; P.B. 6,580 ft.; sdtrkd.; T.D. 9,156 ft.; P.B.; sdtrkd.; cg. sd. 9,928 ft.

Baton Rouge—East Baton Rouge Parish

Geo. Echols No. 1 J. Gebelin, Sec. 66-7s-1w. Drlg. sh. 1,512 ft.

Guaranty Oil Co. No. 1 D. J. Morgan. 9⅝-in. csg. 1,169 ft.; T.D. 3,708 ft.; P. B. to 2,665 ft. to strghtn. hole; sdtrkd.; T.D. 6,539 ft.; sdtrkd.; T.D. 6,500 ft.; abd.

Wm. Helis No. 3-D Duplantier, Sec. 66-7s-1w. Drlg. sh. 3,648 ft.

Wm. Helis No. 1 Farris-Middleton, Sec. 66-7s-1w. R.U.

Wm. Helis No. 1-D Duplantier, Sec. 66-7s-1w. Oil sd. 6,465-72 ft.; T.D. 6,472 ft.; run 7-in. csg.

Wm. Helis No. 1 P. Mazzarisa, Sec. 66-7s-1w. T.D. 6,480 ft.; I.P. 377 B.P.D.; ⅛-in. ck.

Lisbon-Iberia Oil Co. No. 2 Duplantier, Sec. 66-7s-1e. T.D. 6,469 ft.; 7-in. csg. 6,454 ft.; comp.; no ga.

T. G. Markley-Crosby Drlg. Co. No. 2 Knox et al, Sec. 66-7s-1w. Drlg. 1,210 ft.

Bay St. Elaine—Terrebonne Parish

Texas Co. No. 3-B State-Bay, Sec. 13-22s-17e. T.D. 10,513 ft.; tried to blow out; P.B. 6,904 ft.; W.O.C.

Texas Co. No. 19 State-Bay St. Elaine, Sec. 18-22s-18e. Loc.

Bayou Blue—Iberville Parish

Humble O. & R. Co. No. 11 Wilberts, Sec. 67-9s-11e. Loc.

Bayou des Allemands—St. Charles Parish

Amerada Pet. Corp. No. 4 St. Charles Ld. Co., Sec. 13-15s-2e. Loc.

De Large—Terrebonne Parish

Fohs Oil Co. No. 1 Buckley-Mahler, Sec. 25-19s-16e. 13⅜-in. csg. 3,380 ft.; 9⅝-in. csg. 10,058 ft.; drlg. sh. 12,496 ft.

Caillou Island—Terrebonne Parish

Texas Co. No. 29 State, Sec. 17-23s-20e. Rig.

Cameron Meadows—Cameron

Burton-Sutton Oil Co. No. 26 Sch. Ld., Sec. 16-14s-13w. T.D. 2,465 ft.; 13⅜-in. csg. 2,465 ft.; T.D. 6,564 ft.; P.B.; sdtrkd.; T. salt 8,059 ft.; T.D. 8,065 ft.; P.B. to 2,845 ft.; sdtrkd.; T.D. 7,172 ft.; fsg.; set whpstk. 7,062 ft.; stk. D.S.; fsg.

Chacahoula—La Fourche Parish

Sun Oil Co. No. 1 Cypress, Sec. 75-15s-15e. Bldg. drk.

Sun Oil Co. No. 4 Delbert Stark and Brown Cypress Co., Sec. 70-15s-15e. T.D. 7,794 ft.; P.B. 6,764 ft.; sdtrkd.; T.D. 8,268 ft.; stk. D.S.; shot at 8,195 ft.; P.B. 7,642 ft.; sdtrkd. 7,642 ft.; T. D. 8,260 ft.; 9⅝-in. csg. 8,260 ft.; T.D. 8,292 ft.; cleaned hole; found csg. collapsed; recmtd. csg.; rmg. 7,176 ft.; found leak in csg.; recmtd.; P.B. 7,969 ft.; sdtrkd. 8,249 ft.; P.B. 2,200 ft.; sdtrkd.; drlg. sh. 6,687 ft.

Chalkley Field—Cameron Parish

Shell Oil Co., Inc., No. 2 Hanzen, Sec. 21-12s-6w. Cg. sh. 8,752 ft.

Charenton—St. Mary Parish

Fifteen Oil Co. No. 1 T. Brulation, Sec. 19-13s-10e. 7-in. csg. 8,509 ft.; drlg. sdy. sh. 10,447 ft.

Pan American Prod. Co. No. 14 Achee, Sec. 21-13s-9e. Loc.

Pan American Prod. Co. No. 14 Laws Realty Co., Sec. 30-13s-10e. T.D. 7,405 ft.; P.B. 6,950 ft.; sdtrkd.; T.D. 8,009 ft.; P.B. 7,219 ft.; I.P. 70 B.P.D.; ⅛-in. ck.

Pan American Prod. Co. No. 7 Robichaux, Sec. 11-13s-9e. T.D. 1,051 ft.; 7-in. 1,035 ft.; R.U. to pmp.

Pan American Prod. Co. No. 5 South Coast, Sec. 30-13s-10e. T.D. 8,805 ft.; perf. csg. 7,150-66 ft.; tstd. oil and S.W.

Cheneyville—Rapides Parish

Gulf Oil Corp. No. 1 Bickerstaff, Sec. 4-18s-2e. Loc.

Gulf Oil Corp. No. 1 M. B. Pope, Sec. 4-1s-2e. Drlg. sh. 7,456 ft.

Gulf Oil Corp. No. 1 C. U. Pope, Sec. 4-18-2e. Loc.

Texas Canadian Oil Co. No. 2 Pope, Sec. 56-1s-2e. T.D. 5,845 ft.; P.B. 1,650 ft.; sdtrkd. 1,810 ft.; drlg. sh. 3,420 ft.

Convent—St. James Parish

Continental Oil Co. No. 2 Colonial Sugars, Inc., Sec. 50-12s-4e. 18⅝-in. csg. 220 ft.; drlg. sh. 4,430 ft.

Continental Oil Co. No. 2 Realty Operators, Inc., Sec 16. 13⅜-in. csg. 1,492 ft.; T.D. 7,889 ft.; P.B. 7,275 ft.; sdtrkd. 7,305 ft.; T.D. 8,235 ft.; well blew out; caught fire; cleaned hole to 4,866 ft.; P.B. 2,502 ft.; sdtrkd.; T.D. 7,967 ft.; 9⅝-in. csg. 7,950 ft.; T.D. 8,785 ft.; perf. lnr. 8,045-66 ft.; swbg.

Creole—Cameron Parish

Superior Oil Co. No. 7 State, Gulf of Mexico. Drlg. sh. 4,910 ft.

Darrow—Ascension Parish

Humble O. & R. Co. No. 22 Community, Sec. 32-10s-2e. Drlg. sh. 3,836 ft.

Humble O. & R. Co. No. 5 Landry, Sec. 34-10s-2e. T. salt 7,088 ft.; T.D. 7,128 ft.; abd.

Kiva Oil Co. No. 1 Duplessis, Sec. 69-10s-2w. S.D. 2,523 ft.

Dog Lake—Terrebonne Parish

Texas Co. No. 5 Dog Lake, Sec. 5-22s-16e. Drlg. sh. 7,610 ft.

Edgerly Field—Calcasieu Parish

J. G. Sutton Oil Co. No. 1 Reed, Sec. 29-9s-11w. Drlg. sd.&L. 4,658 ft.

Eola—Avoyelles Parish

Amerada Pet. Corp. No. 1 Avoyelles Bnk. & Tr. Co., Sec. 5-2s-3e. Drlg. sh. 7,959 ft.

Amerada Pet. Corp. No. 1 Haas Inv. Co., Sec. 10-2s-2e. Drlg. sh. 5,036 ft.

Amerada Pet. Corp. No. 2 Mrs. C. B Machine, Sec. 6-2s-3e. Loc.

Amerada Pet. Corp. No. 1 Merchants & Planters Bnk., Sec. 41-1s-3e. Loc.

Amerada Pet. Corp. No. 1 Robert Irion Sur., Sec. 6-2s-3e. 9⅝-in. csg. 1,462 ft. cg. sh. 8,620 ft.

W. C. Feazel No. 1 Leila Keller, Sec. 7-2s-1e. Drlg. sh. 7,370 ft.

Gulf Expln. Co. No. 5 Samuel Haas Est., Sec. 8-2s-3e. T.D. 7,006 ft.; P.B. 6,450 ft.; crooked hole; sdtrkd.; T.D. 8,584 ft.; 5½-in. csg. 8,584 ft.; perf. csg. 8,560-80 ft.; flwd. oil and S.W.; killed; W.O.

Geo. E. Lilly et al No. 1 Haas Inv. Co Sec. 1-2s-2e. 10¾-in. csg. 1,500 ft.; drlg. sh. 5,327 ft.

Pomo Prod. Co. No. 2 Sentell, Sec. 8-2s-3e. Drlg. sh. 7,586 ft.

Sid Richardson No. 1 Sam Hasse, Sec. 1-2s-2e. Drk.

Sid Richardson No. 3 State-Bayou Bouef, Sec. 6-2s-3e. Spd.

Sid Richardson No. 1 S. S. Pierce, Sec. 6-2s-3e. T.D. 8,540 ft.; perf. csg. 8,412-28 ft.; I.P. 285 B.P.D.; ⅛-in. ck.

Sid Richardson No. 2 State Bayou Boeuf, Sec. 7-2s-3e. Drlg. sh. 7,130 ft.

Golden Meadows—La Fourche Parish

Wm. Helis-Danciger O. & R. Co. No. 1 Sch. Bd., Sec. 12-19s-22e. Drlg. 2,630 ft.

Geo. Lilly et al No. 1 Jack Collins, Sec. 12-19s-22e. S.D. 8,293 ft.

M. H. Marr and R. A. Bristol No. 1 Church property, Sec. 2-19s-22e. Drlg. sh. 3,020 ft.

M. H. Marr and G. H. Vaughn No. 1 B. & D. Unit, Sec. 12-19s-22e. 10¾-in. csg. 2,301 ft.; S.D. 9,050 ft.

Martex Pet. Corp. No. 2 Falgout Holding Co., Sec. 9-19s-22e. 10¾-in. csg. 2,401 ft.

St. Mary Oil Co. No. 1 Choust Unit, Sec. 12-19s-22e. Drlg. sh. 7,027 ft.

Taylor Fithian et al No. 1 Etenne Perrin, Sec. 12-19s-22e. R.U.

Terouche Oil Co. No. 1 D. B. Cheramie, Sec. 12-19s-22e. S.D. 6,300 ft.

Texas Co. No. 2 State-Catfish Lake, Sec. 3-20-21e. Drlg. sh. 8,860 ft.

Texas Co. No. 3 State-Catfish Lake, Sec. 76-19s-21e. Loc.

Grand Bay—Plaquemines Parish

Gulf Oil Corp. No. 4 Grand Prairie Lve. Dist., Sec. 48-20s-18e. T.D. 9,700 ft.; 7-in. csg. 9,664 ft.; T. oil sd. 9,678 ft. I.P. 770 B.P.D.; ¼-in. ck.

Gulf Oil Corp. No. 6-A Grand Prairie Lv. Dist., Sec. 17-20s-10e. Drlg. sh. 630 ft.

Gulf Oil Corp. No. 2 State, Sec. 6-20s-19e. 9⅝-in. csg. 9,431 ft.; T.D. 10,300 ft.; 7-in. csg. 10,299 ft.; will perf. 9,275-90 ft.

Grand Lake—Cameron Parish

Amerada Pet. Corp. No. 1 Mallard Bay-State, Sec. 12-13s-4w. R.U.

Superior Oil Co. No. 2 State, Twp. 13s-4w. Drlg. sh. 5,096 ft.

Hackberry—Cameron Parish

Gulf Oil Corp. No. 25-A Erwin, Sec. 13-12s-10w. Drk.

Stanolind O. & G. Co. No. 28-A Gulf fee, Sec. 30-12s-10w. T.D. 7,031 ft.; fsg.

Superior Oil Co. No. 1 R. Vincent, Sec. 31-12s-10w. Drlg. sh. 6,090 ft.

Texas Co. No. 26 State, Twp. 12s-9w. T.D. 8,038 ft.; salt; tstg.

Union Sulphur Co. No. 8 Caldwell, Sec. 37-2s-10w. T.D. 7,344 ft.; 7-in. csg. 7,319 ft.; flwd. oil; sanded up.

Union Sulphur Co. No. 12 Doiron, Sec. 37-12s-10w. T.D. 8,064 ft.; P.B.; sdtrkd.; drlg. sh. 7,258 ft.

Union Sulphur Co. No. 1 Josephine O'Quinn, Sec. 37-12s-10w. T.D. 6,927 ft.; sdtrkd.; 7-in. csg. 8,014 ft.; T.S. 8,220 ft.; S.D. 9,663 ft.

Horseshoe Bayou

Texas Co. No. 2 St. Mary Parish Ld. Co., Sec. 37-17s-9e. 7⅝-in. csg. 10,858 ft.

Jefferson Island—Iberia Parish

Phillips Pet. Co. No. 1 Breaux, Sec. 41-12s-5e. Drlg. sh. 8,600 ft.

Texas Co. No. 2 State-Lake Pelgneur, Twp. 12s-5w. T. salt 7,419 ft.; T.D. 7,437 ft.; P.B. 6,292 ft.; P.B. and sidetracked; T.D. 7,964 ft., salt.

Jennings—Acadia Parish

Carter-Perrin & Brian No. 2 Valle, Sec. 47-9s-2w. Spd.

Illes Pet. Co. No. 4 Synd., Sec. 41-9s-2w. Loc.

Guaranty Oil Co. No. 3 Houissere Latrelle, Sec. 47-9s-2w. Loc.

St. Mary Oil Co. No. 1 Gulf fee, Sec. 45-9s-2w. R.U.

Shell Oil Co., Inc., No. 7 Conover, Sec. 40-9s-2w. T.D. 5,200 ft.

Stanolind O. & G. Co. No. 114 Crowley Oil & Mineral Co., Sec. 48-9s-2w. T.D. 3,755 ft.; P.B. 1,293 ft.; P.B. 1,900 ft.; sdtrkd.; T.D. 4,581 ft.; 10¾-in. csg. 4,578 ft.; drlg. sd.&sh. 6,516 ft.

Superior Oil Co. No. 4 Moresi, Sec. 41-9s-2w. Drlg. sh. 6,320 ft.

Lafitte—Jefferson Parish

Texas Co. No. 13 Lafitte, Sec. 17-17s-24e. Drlg. sh. 7,510 ft.

Texas Co. No. 2-B Madison Realty Co., Sec. 19-17s-24e. M.I.M.

Texas Co. No. 2 Sch. Bd., Sec. 20-17s-24e. T.D. 6,601 ft.; sdtrkd. 6,375 ft.; went back into old hole; trying to sdtrk. at 6,387 ft.; T.D. 10,766 ft.; 7-in. csg. 10,195 ft.; perf. csg. 9,876-9,900 ft.; comp.; no ga.

Lake Hermitage—Plaquemines Parish

Gulf Oil Corp. No. 10 La Fourche Basin Levee Dist., Sec. 2-18-25e. Drlg. sd.& sh. 4,712 ft.

Lake Long—La Fourche Parish

Fohs Oil Co. No. 9 State, 600 ft. S of No. 6 State in lake, Twp. 17s-19e. Drlg. sdy. sh. 8,260 ft.

Leesville—La Fourche Parish

Texas Co. No. 21 L.L.&E., Sec. 27-21s-22e. 10¾-in. csg. 1,141 ft.

Lake Mongoulois—St. Martin Parish

Texas Co. No. 7 State, Sec. 10-10s-9e. Drlg. sh. 9,767 ft.

Lirette—Terrebonne Parish

Humble O. & R. Co. No. 1 W. E. Mont. Sec. 32-19s-19e. Loc.

Humble O. & R. Co. No. 3 Laterre Land Co., Sec. 32-19s-19e. Drlg. sh. 4,688 ft.

New Iberia—Iberia Parish

Canal Oil Co. No. 13 Bernard, Sec. 54-12s-7e. Loc.

Wm. Helis No. 6 Sabatier, Sec. 53-12s-2e. Drig. sh. 2,370 ft.
Wm. Helis No. 7 J. E. Schwing, Sec. 56-12s-7e. Drig. sd.&sh. 5,310 ft.
Texas Co. No. 2 Bryant, Sec. 25-12s-7e. R.U.
Texas Co. No. 1 Frances Compton, Sec. 71-12s-7e. Drig. sh. 6,902 ft.
Texas Co. No. 1 Anna B. Schwing, Sec. 71-12s-7e. Drig. sh. 5,997 ft.

North Crowley—Acadia Parish

Humble O. & R. Co. No. 2 Staker, Sec. 33-8s-1e. Loc.

North Tepetate—Acadia Parish

Atlantic Ref. Co. No. 5 Klumpp, Sec. 7-7s-1w. Drig. sh. 7,289 ft.
St. Mary Oil Co. No. 1 Dr. H. Jenkins, Sec. 12-7s-2w. Drig. sd.&sh. 8,015 ft.

Port Barre—St. Landry Parish

Pan American Prod. Co. No. 7 Cormier, Sec. 4-6s-5e. R.U.
Pan American Prod. Co. No. 8 Cormier, Sec. 4-6s-5e. R.U.
Pan American Prod. Co. No. 3 Haas & Hirsch, Sec. 4-6s-5e. T.D. 6,932 ft.; fsg.
Smith & McDannald No. 1 S. W. Futral, Sec. 20-6s-5e. T.D. 4,841 ft., salt; P.B.; prep. to sdtrk.; T. salt 4,832 ft.; sidetracked; T.D. 4,160 ft.; stk. D.S.; sidetracked at 3,000 ft.; drld. to 4,160 ft.; stk. D.S.; P.B. 3,025 ft.; sdtrkd.; P.B. 1,800 ft.; sdtrkd.; drlg. 2,620 ft.
Y. D. Spill No. 1 Gaudet, Sec. 4-6s-5e. S.D. 4,700 ft.

Potash—Plaquemines Parish

Humble O. & R. Co. No. 39 Orleans Lve. Bd., Sec. 13-8s-15e. 16-in. csg. 244 ft.; T.D. 4,548 ft.; stk. D.S.; S.D.; crew on vacation.

Quarantine Bay—Plaquemines Parish

Gulf Oil Corp. No. 10 State QQ, Sec. 17-19s-17e. 9⅝-in. csg. 8,175 ft.; T.D. 8,562 ft.; 7-in. csg. 8,562 ft.; perf. csg. 8,545-57 ft.; I.P. 40 B.P.D.; ⅞-in. ck.
Gulf Oil Corp. No. 9 State QQ, Sec. 18-19s-17e. Loc.
Gulf Oil Corp. No. 5 State, Sec. 17-19s-17e. Loc.

Raceland—La Fourche Parish

Amerada Pet. Corp. No. 1 Godchaux Sugars, Inc., Sec. 34-15s-19e. 18⅝-in. 11,312 ft.; T.A.
Tide Water Asso. Oil Co. No. 2-A South Coast Corp., Sec. 34-15s-19e. 10,461 ft. 5½-in. csg. 10,253 ft.; perf. csg. 10,120-138 ft.; csg. began to leak; cmtd.; P.B. 9,300 ft.; csg. parted at 1,244 ft.; cemented break; perf. csg. 10,120-38 ft.; comp. as dist. producer.

Sorrento—Ascension Parish

Pan American Prod. Co. No. 16 United Ld. Co., Sec. 15-10s-4e. S.D. 1,472 ft.
Scrrento Synd. No. 1 L. L. Bernard, Sec. 27-10s-4e. R.U.

South Houma—Terrebonne Parish

Shell Oil Co., Inc., No. 1 Duplantis, Sec. 74-18s-18e. Loc.

South Roanoke—Jeff Davis Parish

Continental Oil Co. No. 1 Calcasieu Natl. Bnk., Sec. 36-10s-4w. T.D. 9,867 ft.; 8⅝-in. csg. 9,867 ft.

Starks—Calcasieu Parish

Skelly Oil Co. No. 1 Industrial Lbr. Co., Sec. 20-9s-12w. Drig. L.&sd. 5,960 ft.

Valencia—La Fourche Parish

T. G. Markley and Mohawk Oil Corp. No. 1 Deusson Hrs., Sec. 100-17s-20e. T.D. 6,905 ft.; sdtrkd.; T.D. 6,825 ft.; trying to sdtrk.
Pan American Prod. Co. No. 20 Harang, Sec. 8-17s-20e. T.D. 4,608 ft.; sdtrk.; drlg. sd. 5,887 ft.

Venice—Plaquemines Parish

Tide Water Asso. Oil Co. No. 5 Buras Lv. Bd., Sec. 23-21s-30e. T.D. 8,616 ft.; stk. D.S.
Tide Water Asso. Oil Co. No. 10 Manhattan Ld. & Fruit Co., Sec. 26-21s-30e. S.D. 290 ft.

Villa Platte—Evangeline Parish

Continental Oil Co. No. 1 Attales, Sec. 45-3s-2e. Drig. sh. 7,470 ft.
Continental Oil Co. No. 2 Opelousas, Sec. 44-3s-2e. Drig. sh. 9,887 ft.
Continental Oil Co. No. 3 Orise Deville, Sec. 46-3s-2e. Drig. sh. 8,812 ft.

Welsh—Jeff Davis Parish

C. W. Buckley et al No. 1 Calcasieu Natl. Bnk., Sec. 34-9s-5w. Drig. sdy. sh. 5,-617 ft.

West Gueydan—Vermilion Parish

Magnolia Pet. Co. No. 2 J. B. Ferguson, Sec. 5-12s-2w. Drig. sh. 5,267 ft.

West Lake Verret—St. Mary Parish

Shell Oil Co., Inc., No. 3 Jeanerette Lbr. Co. 10¾-in. csg. 2,493 ft.; drig. sdy. sh. 9,478 ft.
Shell Oil Co., Inc., No. 1 Michel, Sec. 1-14s-12e. Loc.

Woodlawn—Jeff Davis Parish

Union Sulphur Co. No. 5 Calcasieu Natl. Bnk., Sec. 12-9s-6w. Drig. sh.&L. 9,-396 ft.
Union Sulphur Co. No. 1 Raymond Hebert, Sec. 6-9s-5w. Drig. sh. 6,286 ft.
Union Sulphur Co. No. 1 M. F. Johnson, Sec. 12-9s-6w. Drig. sh. 9,348 ft.
Union Sulphur Co. No. 3 Mrs. O'Miller, Sec. 7-9s-5w. Drk.

S. LOUISIANA WILDCATS

Acadia Parish

Tri Parish Drillers, Inc., No. 1 Paul Stag, Sec. 4-7s-1w. M.I. rig.

Allen Parish

Bel Oil Corp. No. 1 J. A. Bel, Sec. 22-6s-3w. Cd. gas sd. 6,257-87 ft.; S.W. sd. 6,287-97 ft.; T.D. 9,010 ft.; run 7-in. csg. 8,595 ft.; perf. csg. 8,549-52 ft.; tstd. 40 lb. pres.; rec. 18 stands S.W.; drlg. mud cut with gas and dist.; perf. csg. 6,917-19 ft.; tstd. S.W.; P.B. 6,004 ft.; perf. csg. 6,041-50 ft.; rec. 3 stands oil, 15 stands of oil and gas-cut mud showing S.W.; sqzd. perf.; perf csg. 6,025-36 ft.; tstd. 600 lb. pres.; rec. 4 stands drlg. mud, slight trace of dist.; sqzd. perf.; perf. csg. 6,040-50 ft.; tstd. 25 lb. pres.; dropped to 0; rec. 11 stands of fresh wtr.; 8 stands mud and sd., slightly salty; perf. csg. 7,272-92 ft.; well freezing up; prep. to run bttm.-hole ck.

Assumption Parish

Shell Oil Co. No. 1 Ellis, Sec. 66-16s-14e. Drig. sh. 11,016 ft.

Avoyelles Parish

Adams O. & G. Co. et al No. 1 Poor Farm, Sec. 8-2n-4e. 9⅝-in. csg. 1,024 ft.; drig. sh. 3,720 ft.
G. C Koch et al No. 1 Purdy Hess Lbr. Co., Sec. 25-2n-3e. O.W.D.D.; T.D. 6,-054 ft.; M.I.R.

Beauregard Parish

Atlantic Ref. Co. No. 1 Lutcher Moore, Sec. 22-3s-11w. Loc.
Atlantic Ref. Co. No. 1 Rice Ld. & Lbr. Co., Sec. 22-3s-11w. Loc.
Atlantic Ref. Co. No. 1-A Rice Ld. & Lbr. Co., Sec. 22-3s-11w. T. Cook Mtn. 6,628 ft.; T.D. 8,518 ft.; 5½-in. csg. 8,-518 ft.; P.B. 8,384 ft.; perf. csg. 8,282-97 ft.; tstd. 35 lb. pres.; rec. 51 stands S.W.; sqz. perf.
Standard Oil Co. of Calif. No. 1 Long Bell Lbr. Co., Sec. 23-4s-9w. T. Cckflu 6,949 ft.; 9⅝-in. csg. 7,830 ft.; cd. top Wlx. sd. 9,630 ft.; T.D. 10,092 ft.; fsg.

Calcasieu Parish

Humble O. & R. Co. No. 1 Edgewood Ld. & Logging Co., Sec. 32-7s-10w. Drlg. sh. 7,530 ft.
Union Sulphur Co. No. 2 Drew Manuel Training Sch., Sec. 17-10s-11w. T.D. 8,482 ft.; abd.

Evangeline Parish

Continental Oil Co. et al No. 1 Mrs. Lillie Manuel, Sec. 33-4s-1w. T. Vicksburg 7,740 ft.; T.D. 11,341 ft.; P.B. 10,145 ft.

Iberia Parish

Texas Co. No. 3-B State-Vermilion Bay, Twp. 16s-5e. T. salt 5,970 ft.; B. salt 7,540 ft.; 9⅝-in. csg. 7,705 ft.; drlg. sd. 10,210 ft.

Iberville Parish

Houch & Thompson No. 1 Kessler & Folse, Sec. 40-11s-13e. T.D. 9,165 ft.; fsg.; sdtrkd.; drld. to 8,929 ft.; stk. D.S.
Humble O. & R. Co. No. 1-B A. Wilberts Lbr. & Shingle Co., Sec. 78-8s-8e. R.U.
Shell Oil Co., inc., No. 1 Natalbany Lbr. Co., Sec. 18-9s-2e (tight well). T.D. 10,-524 ft.; P.B. 9,100 ft.; perf. csg. 9,060-65 ft.; made sqz. job; perf. csg. 9,035-56 ft.; rec. 23 stands oil and S.W.; P.B. 9,057 ft.; pulled tbg.; abd.

Jeff Davis Parish

R. M. Bleakie et al No. 1 Lack-Moore Co., Ltd., Sec. 29-7s-6w. 13⅜-in. csg. 65 ft.; 9⅝-in. csg. 1,123 ft.; cg. sd. 7,-290 ft.
Stanolind O. & G. Co. No. 3-B Ervin & Bishop, Lot 15, Sec. 7-9s-5w. Drlg. sh. 5,986 ft.
Union Sulphur Co. No. 1 H. B. Tietje, Sec. 36-7s-4w. T.D. 9,220 ft.; 7-in. csg. 8,227 ft.; perf. csg. 8,051-65 ft.; swbd. S.W.; pulling screen and lnr.; P.B. 7,-648 ft.; perf. csg. 7,632-46 ft.; showing S.W. and oil; P.B. 7,639 ft.; perf. csg. 7,628-38 ft.; failed to flw.; prep. to reperf. csg.; perf. csg. 7,629-33 ft.; swbd. dry; perf. csg. 7,636-38 ft.; swbd. S.W.; perf. csg. 7,582-96 ft.; tstd. S.W., small show of oil; sqzd. perf.; reperf csg. 7,549-57 ft.; tstg.
Union Sulphur Co. No. 2 H. B. Tietje, Sec. 36-2s-4w. Drk.

La Fourche Parish

J. Perry Scranton No. 2 Martinez, Sec. 132-15s-17e. T.D. 8,968 ft.; run electrical survey.
Texas Co. No. 1 L.L.&E. Golden Meadows, Sec. 77-19s-21e. 9⅝-in. csg. 10,-744 ft.; T.D. 12,526 ft.; P.B. 11,810 ft.; made sqze. job; perf. csg. 10,769-71 ft.; tstd. S.W.; P.B. 10,269 ft.; stk. D.S.; drlg. on junk; perf. csg. 8,975-90 ft.; tstd. dry gas, 2,750 lb. W.P.; perf. csg. 7,300-20 ft., rec. drlg. mud; perf. csg. 4,400-30 ft.; tstd. dry gas; sqzd. perf.; perf. csg. 4,405-4,530 ft.; perf. csg. 4,-435-45 ft.; tstg.
Tide Water Asso. Oil Co. No. 1 Delta Farms, Inc., Sec. 6-17s-23e. Loc.

Livingston Parish

Fowler & Tower No. 1 Ellis Hood, Sec. 37-7s-3e. Drig. 600 ft.

Orleans Parish

W. T. Burton No. 3-B Faubourg de Montluzin, Sec. 1-11s-13e. Drig. sh. 7,703 ft.
W. T. Buton No. 1 L.&N.R.R., Sec. 18-11s-15e. T.D. 9,000 ft.; 7⅝-in. csg. 8,-820 ft.; T.D. 10,138 ft.; well tried to blow out; set retainer; T.D. 10,040 ft.; P.B. 9,740 ft.; sdtrkd.; drlg. sh. 9,840 ft.
W. T. Burton No. 3 L.&N.R.R., Sec. 25-11s-14e. Loc.
W. T. Burton No. 2 State-Lake Pontchartrain, Twp. 10s-10e. Loc.

Plaquemines Parish

Gulf Oil Corp. No. 8 State P.P., Sec. 18-23s-31e. Loc.

St. Bernard Parish

Carter, Molero & Brian, Sec. 129-14s-14e. Drk.
Gulf Ref. Co. No. 4-State-R.R. (Lake Borgne), Twp. 12s-15e. 9⅝-in. csg. 8,-161 ft.; T.D. 10,632 ft.; P.B. 9,700 ft.; rmd. to 9,658 ft.; lost core bbl.; P.B. sdtrkd. 8,912 ft.; T.D. 10,528 ft.; 7-in. csg. 10,494 ft.; fsg.
Vendome Pet. Co. No. 2 Kenilworth Plantation, Sec. 59-13s-14e. Drig. sh. 10,905 ft.

St. Landry Parish

Deep Rock Oil Co. No. 1 B. Babineaux, Sec. 39-8s-4e. S.D. 8,950 ft.

St. Martin Parish

Shell Oil Co., Inc., No. 1 Iberville Ld. Co., Sec. 86-8e-7s. Loc.
Texas Co. No. 12 St. Martin, Sec. 21-8s-7e. Drig. sh. 5,920 ft.

St. Mary Parish

Acadian Prod. Co. No. 1 Robichaux, Sec. 27-13s-9e. T.D. 3,110 ft.; abd.
Perry S. Cooney No. 1 A. W. Allain, Sec. 46-13s-9e. S.D. 2,600 ft.

St. Tammany Parish

Honey Island Dev. Corp. No. 1 W. C. Forbes, Sec. 33-7s-15e. T.D. 100 ft.; 20-in. csg. 87 ft.

Terrebonne Parish

Shell Oil Co., Inc., No. 1-A Peters, Sec. 47-19s-19e. Dredge canal.

Vermilion Parish

La. Ld. & Expln. Co. No. 1 La. Fur. Co., Sec. 21-15s-1e. Drig. sdy. sh. 10,268 ft.

Vernon Parish

W. T. Burton No. 1 W. T. Burton Mineral fee, Sec. 32-1n-6w. Drig. sh. 7,-100 ft.
Nat Hunter et al No. 1 W. T. Burton fee, Sec. 13-2n-5w. Drk.

West Feliciana Parish

McKay et al No. 1 James Montgomery. Loc.

TEXAS

Week Ending July 8

GULF COAST FIELDS

Old Ocean—Brazoria County

Harrison & Abercrombie No. 2 Larsen et al. C. Breen Sur. 9⅝-in. csg. 7,000 ft.; T.D. 10,552 ft.; comp.; no ga.
Harrison & Abercrombie No. 1 C. W. Markle, Polly & Chance Sur. 9⅝-in. csg. 7,016 ft.; T.D. 11,079 ft.; sdtrkd.; drlg. sh. 9,067 ft.
Harrison & Abercrombie No. 2 Osburn, C. Breen Sur. 9⅝-in. csg. 7,000 ft.; cg. sh. 10,237 ft.
Mid-Continent Pet. Corp. No. 1 Wm. Chenault, C. Breen Sur. 9⅝-in. csg. 7,000 ft.; drlg. sh. 7,312 ft.
Sun Oil Co. No. 3 Campbell, C. Breen Sur. R.U.

Cedar Point—Chambers County

Standard of Texas et al No. 13-117 State. 10¾-in. csg. 1,600 ft.; cg. sh. 6,-277 ft.

Seabreeze—Chambers County

Sun Oil Co. No. 2 Hoffman, T.&N.O. Sur. No. 131. R.U.

Turtle Bay—Chambers County

Stanolind O. & G. Co. No. 1 State, Tr. No. 39. Loc.

West Columbia—Brazoria County

Texas Co. No. 33 Abrams, G. Tennille Sur. Drig. sh.&L. 2,656 ft.

Thompson—Fort Bend County

H. M. Naylor No. 3 Musselman, H. Chrisman Sur. Drig. sh. 6,037 ft.
H. M. Naylor No. 1 M. W. Shanks, Horatio Chrisman Sur. Drig. 5,786 ft.
H. M. Naylor No. 5 Musselman, H. Chrisman Sur. Bldg. rd.

Caplen—Galveston County

Sun Oil Co. No. 1 Zinn & Forman, S. F. Hughes Sur. Bldg. drk.

League City—Galveston County

Phillips Pet. Co. No. 1 Bryan, Perry & Austin Sur. R.U.&S.D.
Phillips Pet. Co. No. 1 Esperson-Phillips, S. F. Austin Sur. T.D. 9,330 ft.; 5½-in. csg. 9,328 ft.
Phillips Pet. Co. No. 5 Bertha Lobit Wilson, Perry & Austin Sur. 10¾-in. csg. 2,541 ft.; drlg. sh. 8,410 ft.
Phillips Pet. Co. No. 1 Rice, Perry & Austin Sur. Drlg. sh. 6,030 ft.
Phillips Pet. Co. No. 3 Lobit Wilson, Perry & Austin Sur. Cg. sd. 8,967 ft.
Phillips Pet. Co. No. 2 Stewart Title Co., S. F. Austin Sur. T.D. 9,270 ft.; 7-in. csg. 9,180 ft.; perf. csg. 8,954-59 ft.; flwd. oil and gas; reperf. csg. 8,699-8,704 ft.; tstg.
West Prod. Co. No. 1 fee, Lot 2, Blk. 5, Perry & Austin Sur. Loc.

Clear Lake—Harris County

Humble O. & R. Co. No. 14-C Humble-West, J. Lindsay Sur. Loc.

Clinton—Harris County

Stanolind O. & G. Co. No. 2 Edwards, Reels & Trobough Sur. Drk.

Eureka—Harris County

Jack Frazier No. 1 W. T. Helberg, H. Reinerman Sur. R.U.
Houston Oil Co. No. 3 Helberg & Lackner, J. Reinerman Sur. Loc.
Tide Water Asso. Oil Co. No. 2-B Lackner, H. Reinerman Sur. T.D. 8,090 ft.; perf. csg. 8,040-50 ft.; sqzd. perf.; perf. csg. 7,934-44 ft. and 7,944-49 ft.; tstg.

Fairbanks—Harris County

Kirby Pet. Co. et al No. 1 Hillebrenner, T. M. Dorsett Sur. 9⅝-in. csg. 1,300 ft.; T.D. 6,849 ft.; perf. csg. 6,843-46 ft.; flwg. gas; made sqze. job; reperf. csg.
Union Prod. Co. No. 1 C. H. Daniel, S. Reynolds Sur. 10¾-in. csg. 1,479 ft. drlg. sh. 7,224 ft.

Friendswood—Harris County

Humble O. & R. Co. No. 31 Humble-West, L. Hemenway Sur. T.D. 1,016 ft.; S.D.
Humble O. & R. Co. No. 8 West, T. Choate Sur. T.D. 6,041 ft.; T.S. 5,460 ft.; S.D.

South Houston—Harris County

Commerce Oil Co. No. 1 O. R. Staiti, Callahan & Vince Sur. 10¾-in. csg. 1,-516 ft.; T.D. 7,554 ft.; well tried to blow out; stk. D.S.; fsg.

Francitas—Jackson County

Crosby Drlg. Co. No. 1 Hale & Allee, Green Sur. S.D. 8,036 ft.

Cheek—Jefferson County

Humble O. & R. Co. No. 6 Broussard, M. Grange Sur. Loc.

Clam Lake—Jefferson County

Shell Oil Co., Inc., No. 3 McFaddin, McFaddin Sur. T.D. 4,001 ft.; P.B. 2,048 ft.; made sqz. job 2,042-47 ft.; W.O.C.

La Belle—Jefferson County

Sun Oil Co. No. 5 Broussard-Hebert, T. &N.O. Sur. No. 207. 18⅝-in. csg. 130 ft.; T.D. 7,650 ft.; cmtd. 9⅝-in. csg.; milling on csg.

South China—Jefferson County

Geo. Echols et al No. 2 Fontenot, H.T.& B. Sur. No. 17. 10¾-in. csg. 1,134 ft.

Esperson—Liberty County

General Crude Oil Co. No. 4-B Esperson, A. McNeil Sur. R.U.
General Crude Oil Co. No. 5-B Esperson, A. McNeil Sur. R.U.

Hardin—Liberty County

Gulf Oil Corp. No. 4 Cessna, H. B. Johnston Sur. R.U.

North Markham—Matagorda County

Ohio Oil Co. No. 2 Carlson, I.&G.N. Sur. No. 2. 10¾-in. csg. 1,472 ft.; T.D. 6,886 ft.; P.B. to srghtn. hole; drlg. sh. in sdtrkd. hole 6,579 ft.

Conroe Field—Montgomery County

E. I. Thompson, Tr., No. 1 W. D. Granger, T.&N.O. Sur. No. 14 (Wilcox test SE. edge of prod.). 16-in. csg. 82 ft.; 10¾-in. csg. 1,800 ft.; T.D. 9,000 ft.; abd.

Orange—Orange County

Gulf Oil Co. No. 10-A Winfree, Wm. Dyson Sur. Drig. sh. 5,739 ft.
John Mayo No. 1 M. J. Williams, Dyson Sur. R.U.

Ace—Polk County

Dick Schwab No. 1-C Kirby-West Lbr. Co., G. A. Thomas Sur. Loc.
Shell Pet. Corp. No. 2 Doucett, P. A. Sublett Sur. Loc.

Segno—Polk County

Gulf Oil Corp. No. 4 Quinn, A. Morales Sur. R.U.
Gulf Oil Corp. No. 1 Ragan, I.&G.N. Sur. No. 15. R.U.
Gulf Oil Corp. No. 19 Wing, I.&G.N. Sur. No. 14. T.D. 8,156 ft.; comp.; no ga.
Humble O. & R. Co. No. 13-B Kirby Lbr. Co., P. Garcia Sur. Bldg. rd.
Humble O. & R. Co. No. 14-B Kirby Lbr. Co., M. Victor Sur. T.D. 8,190 ft.; W.O.C.

Orange—Port Neches

Texas Co. No. 15 Kuhn, A. E. Hall Sur. 10-in. csg. 1,794 ft.; drlg. sd. 4,564 ft.

Spurger—Tyler County

Republic Prod. Co No. 21 fee, N. Hurd

Lge. 9⅝-in. csg. 1,807 ft.; T.D. 7,743 ft.; 5½-in. csg. 7,735 ft.; perf. csg. 7,635-40 ft.; flwd. oil and S.W.; killed.
Republic Prod. Co. No. 22 fee, N. Hurd Lge. Drlg. sh. 7,510 ft.

GULF COAST WILDCATS

Brazoria County

Crosby Drlg. Co. No. 1 H. A. Paine, A. G. Reynolds Sur. R.U.
Fabriguze et al No. 1 Freeport Sulphur, Stephen F. Austin Sur. (Byran Mound). M.I.M.
Hamman Expltn. Co. No. 1 Darrington, Achilles McFarland Sur. 10¾-in. csg. 1,200 ft.; 7-in. csg. 8,887 ft.; T.D. 8,917 ft.; P.B. 8,490 ft.; sdtrkd.; T.D. 8,866 ft.; well trying to blow out; mixing mud.
Hamman Expltn. Co. No. 2 Darrington, State Prison Farm, F. Bingham Sur. W.O. rig.
Glenn McCarthy No. 1 J. C. Carr, J. D. Valderas Sur. W.O. rig.
Glenn McCarthy No. 1 Houston Farm Dev., James F. Perry and E. Austin Sur. No. 7. Drlg. sh. 9,456 ft.
Rowan Drlg. Co. No. 1 Vilren, J. S. Talmage Sur., Sec. 68. R.U.

Chambers County

Geo. Anderson No. 1 Julia Casey, W. D. Smith Sur. Loc.
Plymouth Oil Co. No. 1 Wilburn, Wm. H. Moore Sur. 10¾-in. csg. 1,994 ft. T.D. 7,416 ft.; stk. D.S.; sdtrkd.; drlg. sh. 5,650 ft.
L. D. Roberts No. 1 C. H. Lanz, T.&N. O. Sur. No. 35. 10¾-in. csg. 1,030 ft.; cg. sh.&L. 7,025 ft.

Colorado County

Cockburn Oil Corp. No. 1 R. W. Ferrs, H. Chrisman Sur. Loc.

Fort Bend County

Lloyd Farr et al No. 1 Beard, H.&T.C. Sur. No. 118. Spd.
O. J. Martin et al No. 1 W. B. Blakely, J. Frederick Sur. Cg. sh. 7,686 ft.
R. N. Ranger No. 1 Basset Blakeley, Thos. Habermacher Sur. Loc.
Superior Oil Co. No. 1 Shirie Beard et al, H.&T.C. Sur. No. 111. 10¾-in. csg. 1,230 ft.; T.D. 7,524 ft.
Woodland Oil Co. No. 1 Herietta Berg et al, H.&T.C. Sur., Sec. 25. T.D. 7,410 ft.; 9⅝-in. csg. 7,391 ft.

Galveston County

Sun Oil Co. No. 1 State. East Galveston Bay. Drlg. sh. 2,038 ft.

Hardin County

Geo. Echols No. 1 Merchant Est., Stephen Jackson Lge. (E. flank Sour Lake field). Drlg. sh. 1,310 ft.
Norcoff Corp. No. 1 Caswell, B.B.B.&C. Sur. No. 72 (E flank Saratoga dome). T.D. 4,900 ft.; prep. to sdtrk.

Harris County

Housh & Thompson et al No. 1 J. L. Krey, B. Herra Sur. 10¾-in. csg. 759 ft.; cg. sh. 7,236 ft.
M. I. and Joyce Richardson No. 1 J. J. Sweeney, John Ogburn Sur. Drk.
L. R Wilhite et al No. 1 Houston-Harris Co. Ship Channel, Nav. dist., Ezekiel Thomas Sur. Bldg. drk.

Jackson County

Humble O. & R. Co. No. 1 M. H. Toney, R. Musquiz Sur. R.U.
J. Mayo et al No. 1 J. H. Tucker, R. Musquiz Sur. 10¾-in. csg. 593 ft.; T. D. 5,829 ft.; P.B. 4,980 ft. to str. hole.
Moore & Ahern No. 1 Victoria Ld. & Loan Co., P. Scott Sur. Drlg. sh. 5,268 ft.
Norcuff Oil Corp. No. 1 Hollingsworth, Eli Mercer gr. 10¾-in. csg. 466 ft.

Jasper County

Bob Milner et al No. 1 Cartwright, E. O. LeGrande Sur. 10¾-in. csg. 1,042 ft.; drlg. sh. 3,840 ft.

Jefferson County

I. E. Harwell No. 1 State, Gulf of Mexico. T.D. 5,840 ft.; D.S. stk.; pulled in two; S.D.
Humble O. & R. Co. No. 15-B McFaddin Beach State, Gulf of Mexico. 660 ft. NW of No. 13-B. Drlg. sh. 5,462 ft.

Liberty County

Stanolind O. & G. Co. No. 1 E. M. Flowers, I.&G.N.R.R. Sur. 10¾-in. csg. 1,588 ft.; T.D. 9,109 ft.; perf. csg. 8,700-05 ft.; tstd. S.W.; perf. csg. 8,104-08 ft.; flwd. 150 B.O. 15 hrs.; 5/32-in. ck.; T.P. 1,400 lb.; C.P. 1,540 lb.

Matagorda County

Continental Oil Co. No. 1 Savage, Daniel Yeamans Sur. T. sd. 3,842 ft.; well blew out; killed; T.D. 5,810 ft.; P.B. 4,195 ft.; perf. csg. 4,132-42 ft.; tstd. dry gas; killed; perf. csg. 3,642-52 ft.; tstd. dry gas; perf. csg. 2,940-45 ft.; tstd. dry gas; killed; reperf. csg.

Orange County

American Eagle Oil Co. No. 2 Geo. Pell, Geo. A. Patillo Sur. Loc.

Polk County

Jack Frazier et al No. 2 Bergman, A. Viesca Sur. Drlg. sh. 6,775 ft.
Patrick-Tyrell Drlg. Co. No. 1 O. L. Jackson, C. Devore Sur. Loc.

S. W. TEXAS WILDCATS

Bastrop County

Joe Hughes et al No. 2 Lentz, Freeman Wilkinson Sur. No. 21. T.D. 2,312 ft.; 7-in. csg. 2,260 ft.
Kirby Pet. Co. No. 1 Meeks, Thos. Garretson Sur. No. 19. Drlg. sh. 2,015 ft.

Bell County

M. M. Gordon No. 1 Steele, Oliver T. Tyler Sur. S.D. 1,201 ft.
G. P. Shelton et al No. 1 Nelson, Michael Griffin Sur. S.D. 1,208 ft.

Bexar County

E. D. Harris No. 1 Schroeder, Luke Bust Sur. No. 37. Cg. clk. 775 ft.
Long Bros. Drlg. Co. No. 1 Applewhite, B. Ruiz Sur. No. 35. T. Austin clk. 2,008 ft.; T.D. 2,290 ft.; abd.

Blanco County

H. C. McCart No. 1 Geo. Lester, Newton Carson Sur. No. 34. Drlg. L. 506 ft.

Brooks County

Magnolia Pet. Co. No. 2 Denman, Jose Marcelo Hinojosa gr. Drlg. 5,600 ft.

Caldwell County

Magnolia Pet. Co. No. 1 Morris, Moses Gage Sur. No. 26. Loc.

Duval County

W. L. Catlin et al No. 1 Louis Escapule, J. Poitevent Sur. No. 73. Loc.
Lee Corkill et al No. 1 Tonkin, Benavides Sur., Sec. 30. Drlg. sh. 5,723 ft.
Joe S. Dean et al No. 1 Hyatt, S.&M Sur., Sec. 535. R.U.
Wm. Nichols et al No. 1 Tom Graham, Cuadrilla Irrg. Sur., Sec. 572. T.D. 4,800 ft.; rec. 630 ft. P.L.O.; D.S.T. 4,782-98 ft.; 5½-in. csg. on bttm.; reperf. csg. 4,784-90 ft.; flwg. 3 B.O.P.D.; ⅛-in. ck.; T.P. 1,600 lb.; C.P. 1,700 lb.; S.I.
G. L. Rowsey et al No. 1 Parr. S.A.&M. G.R.R. Sur., Sec. 117. Drk.
W. A. Wagner No. 1 D. J. Weikel, John H. Gibson Sur. No. 497. R.U. and S.D.

Edwards County

O. L. Alderfer and C. W. Davis No. 1 J. A. Earwood, C.C.S.D.&R.G.N.G.R.R. Sur., Sec. 158. S.D. 125 ft.

Frio County

Wilcox O. & G. Co. No. 1 R. H. Harris, Hooper & Wade Sur. No. 3. T. Edw. L. 4,134 ft.; T.D. 4,192 ft.; abd.

Goliad County

Cron & Gracey et al No. 1 O. G. Drier, B.S.&F. Sur. No. 7. Set 1,320 ft. of 7-in. lnr. at 5,190 ft.; T.D. 5,885 ft.; set 812 ft. of 5-in. lnr.; perf. 5,566-70 ft.; tstd. S.W.; W.O.; perf. csg. 5,866-70 ft.; tstd. S.W.; to reperf. csg. 5,767-70 ft.; tstd. S.W.; perf. csg. 5,552-55 ft.; tstd. S.W.; abd.
Crown Central Pet. Co. et al No. 1 C. G. Wood, John Shern Sur. R.U.

Guadalupe County

Burton, Garvin & Womack No. 1 Henry Weil, E. De los Santos Coy Sur. No. 93. L. O.S. 200-10 ft.; 6-in. csg. 210 ft. acd.; cmt. failed to hold; recmtd.; swbg. 5 B.O.P.D.; prep. to D.D.; S.D. 400 ft.; abd.
C. L. Felty No. 1 Warneke, Vicente Duran Sur. No. 4. S.D. 765 ft.
Great Southern Oil Co. No. 1 Goodson, John Tom Sur. T.D. 2,063 ft.; abd.
John Hueners No. 1 Boecker, John Baker Sur. No. 26. S.D. 1,013 ft.
Tide Water Asso. Oil Co. No. 1 Jackson, J. O. Blair Sur. No. 422. Loc.

Hidalgo County

Shary Maddox No. 1 A. C. Neal, Santa Anita gr. Drlg. sh. 6,255 ft.
Pantano Pet. Co. No. 1 R. E. Harding, La Mestena Rnh. subd. (La Blanca field). Drlg. sh. 7,580 ft.
Wheelock & Smith No. 1 Yturria Town & Imp. Co., Anastacio Villareal Por. No. 43. T.D. 4,069 ft.; perf. csg. 3,579-87 ft.; tstd. gas and S.W.

Jim Hogg County

Imperial Oil Co. No. 1 Jose M. Gutierrez, H. Rodriquez Sur. No. 142. 10-in. csg. 40 ft.; S.D. 790 ft.
Johnson & Robinson No. 1 Palacios, Mary Montgomery Sur. T.D. 3,519 ft.; 5½-in. csg. 2,900 ft.; abd.
Magnolia Pet. Co. No. 1 Ysaquirre et al, "Agua Nueva de Abajo." J. M. Ramirez Sur. 13⅜-in. csg. 2,083 ft.

Jim Wells County

Loring Bradstreet No. 1 Rehment, Lot 12, Morro Phillips Sur. Loc.
Gorman & Yoakam No. 1 J. A. Schmidt, Casa Blanca gr. Drlg. sdy. sh. 4,330 ft.
H. H. Howell No. 1 Lindsay & Reed, Teresa Bustillos Sur. T.D. 5,621 ft.; abd.
Magnolia Pet. Co. No. 1 J. O. Maun, Lot 6, Blk. 11. T.D. 6,803 ft.; run csg.
Pettus O. & R. Co. No. 1 R. Y. Garcia, S.A.&M.G. Sur. T.D. 6,020 ft.; abd.
W. R. Quinn et al No. 1 D. M. and Fritz Pundt, T. C. Wright Sur. S.D. 4,770 ft. 7-in. csg. 4,770 ft.; T.D. 5,415 ft.; P.B. 4,761 ft.; set 5-in. csg. 4,892 ft.; drld. out 4,810 ft.. flwg. gas, S.S.O.
Smith & Storey No. 1 Shaeffer, Stanley Welch Sur. No. 90. T.D. 2,335 ft.; 5½-in. csg. 2,335 ft.; perf. csg. 2,194-2,204 ft.; tstd. S.W.; S.D.

Karnes County

Paul Meador No. 1 Ruhman, J. Richardson Sur. Drk.

Kendall County

C. M. Dewey No. 2 Seidensticker, R. Davis Sur. No. 20. S.D. 714 ft.

Kimble County

W. S. Kelly No. 1 A. L. Bierchwale, D. Lloyd Sur. S.D. 135 ft.

La Salle County

Eugene Garner No. 4 Yeager, John H. Gibson Sur. No. 37. T.D. 1,037 ft.; abd.
C. B. Johnson et al No. 1 Yeager, A.B. &M. Sur. No. 53. Loc.

Lavaca County

W. L. Goldston No. 1 Turk, Edwards Sur. Drlg. sh. 5,516 ft.

Lee County

Fred Pederson et al No. 1 Brown, David Hudson Sur. Pmpd. 100 B.F.; 36 hrs.; 3 bbl. oily emulsion; cd. L. 6,461-90 ft.; T.D. 6,571 ft.; S.D.

Live Oak County

R. G. Pattillo No. 1 H. D. Miller, Willis Darby Sur. No. 4. T.D. 5,016 ft.; abd.
Salviejo Oil Co. No. 1 J. W. Hines et al, Sec. 98, Blk. 3953, J. W. Mackey Sur. No. 399. Cg. sh. 2,248 ft.
L. W. Stieren No. 3 Lange, Thos. Adams Sur. T.D. 1,497 ft.

McMullen County

G. W. Basom No. 1 Jacob, W. H. Jacob Sur. No. 50. Drlg. sh. 618 ft.
Gordon Grffin No. 1 Dilworth, R. A. Moore Sur. Cg. 1,726 ft.
C. C. Shumway No. 14 Shiner, S. N. Steinhardt Sur. No. 62. S.D. 10 ft.

Medina County

Victor Ziegler No. 1 Paul Haby, Wm. G. Still Sur. No. 1. S.D. 1,000 ft.; abd.

Milam County

Brown Carroll et al No. 1 John Hancock Life Ins. Co., Juan Jose Sur. Drlg. sh. 63 ft.

Nueces County

Awoeb Oil Co. et al No. 1 Minnie Bock, Geo. H. Pauls subd. Cg. sd. 3,810 ft.
Bay-Tex Oil Co. et al No. 1 Dallas Joint Stock Ld. Bnk., Palo Alto gr., Sec. 148. Drlg. sh. 5,184 ft.
Blanco-Buchanan No. 2-C Gandy, Geo. H. Pauls subd. T.D. 3,830 ft.; run csg.
E. A. Graham et al No. 1 Sam Taylor, D. M. Oliver Sur., Sec. 465. Cg. 5,946 ft.
John Manley et al No. 1 Ruegg, Geo. H. Pauls subd. of Driscoll ranch. Loc.
Mills Bennett Prod. Co. No. 1 Poenisch, E. Villareal Sur. Drlg. sh. 6,678 ft.
Phillips Pet. Co. No. 1 Gandy, Geo. H. Pauls subd. of Driscoll ranch. R.U.
Reed & Cox No. 1 Ruegg, Geo. H. Pauls subd. of Driscoll ranch. Drlg. sh. 1,620 ft.
Shield Oil Co. No. 1 Magee, Blk. 10, Driscoll ranch, Geo. Paul subd. 10¾-in. csg. 650 ft.; cg. S.W. sd. 5,546 ft.
Texas Conservative Oil Co. No. 1 J. E. Humble, Geo. H. Pauls subd., Driscoll ranch. T.D. 6,010 ft.; 5½-in. csg. 5,960 ft.; perf. csg. 5,658-83 ft.; swbg.
Texas Conservative Oil Co. No. 1 Julian Wright, Geo. H. Pauls subd. of Driscoll ranch. T.D. 6,010 ft.; abd.

Refugio County

Hewitt & Daugherty No. 2-A J. M. Aldrete Sur. T.D. 6,250 ft.; abd.
Phillips Pet. Co. No. 1 N. S. Hundson, T. Antonio Gallan Sur. T.D. 7,020 ft.; abd.
Phillips Pet. Co. No. 1 Toland, Guadalupe Cobian & Family Sur. Drlg. sdy. sh. 5,410 ft.
Quintana Pet. Corp. No. 10 Williams, C. E.P.I.&M. Co. Sur. T.D. 6,220 ft.; perf. csg. 5,870-80 ft.; flwd. O.&S.W.; tstg.; no report.

San Patricio County

Seaboard Oil Co. No. 1 Blumberg, A.B. &M. Sur. No. 12. 10¾-in. csg. 1,074 ft. S.D. 6,015 ft.

Starr County

Herbert Aid No. 1 J. G. Escobas, J. J. Gutierrez Porc. 72. Drlg. sd. 742 ft.
Baldridge & Vessels No. 1 W. I. Cameron, Geo. W. Smith Sur. No. 228 (Rincon field). T.D. 4,302 ft.; abd.
Banks, Miller Oil Co. No. 1 McLean, Unit 3, Valle Del Rico Rio Grande subd., J. B. Villareal Porc. 75. Drlg. sd. 2,252 ft.
Clopton & Mitchell No. 1 Tijerina, J. A. Falcon Porc. No. 80. Drlg. sh. 78 ft.
H. L. Curry No. 3 Tijerina, H.E.&W.T. R.R. Sur. No. 299. S.D. 678 ft.
C. L. Foster No. 1 H. Garza, Juan Salinas, Porc. No. 71. S.D. 100 ft.
Liberty Oil Co. No. 1 Bass, S.K.&K. Sur. No. 71. S.D. 150 ft.
Lynes & Robertson No. 1 Villareal, C.C. S.D.&R.G.N.G.R.R. Sur. No. 241. Loc.
Magnolia Pet. Co. No. 2 Guerra, Santa Cruz gr. Drlg. sh. 3,450 ft.

Travis County

Burns Oil Co. No. 2 Bengtson, Henry Martin Sur. No. 65. Cg. sdy. sh. 460 ft.
Williams & Bick No. 2 Montpelier Savings Bnk., C. Barker Sur. No. 38. T.D. 830 ft.; abd.

Victoria County

Carter, Rubsamen et al No. 1 G. W. Vogt, Victoria Townsite Sur. 10¾-in. csg. 481 ft.
John Mayo No. 1 Voight, 2 mi. south of Victoria. R.U.
Renwar Oil Corp. et al No. 1 Johnston, F. Perez Sur. Bldg. drk.

Webb County

J. M. Anderson et al No. 1 Frost, C.C.S. D.&R.G.N.G.R.R. Sur. No. 17. Loc.
Boysen & Jones No. 2 Watkins, San Casimiro gr. Loc.
F. J. Hines No. 1 Bruni, M. T. Tippin Sur. S.D. 2,816 ft.
Houser & Campbell No. 1 Benavides, R. Benavides Sur. No. 692. 10¾-in. csg. 21 ft.; drlg. sh. 1,510 ft.
Gordon Rouse No. 1 Withers, G. B. Withers Sur. No. 52. S.D. 1,010 ft.
Rowan & Hope, Inc., No. 2 Laurel Bros., A. S. Laurel Sur., Blk. 4. Drlg. sh. 3,468 ft.; no report.
V. G. Schimmel No. 1 Benavides, B.S.& F. Sur. No. 693. T.D. 2,350 ft., oil sd.; 7-in. csg. 2,350 ft.

Willacy County

Midwest Royalty Co. No. 1 Dayton, San Juan Decarriutas San Matias subd., Sh. No. 47. 10¾-in. csg. 2,370 ft.; T.D. 9,005 ft.; abd.

Williamson County

W. O. Caffey No. 1 J. Seggern, Hardy Pace Sur. Cg. L. 1,151 ft.

Zapata County

Joe Martinez No. 2 Bruni, J. V. Borego gr. S.D. 355 ft.

E. C. TEXAS WILDCATS

Anderson County

R. H. Williamson No. 1 O. G. Rogers, Wm. Greenwood Sur., 6 mi. SW of Elkhart. Loc.

Angelina County

Ginter Bros. and Jones No. 6 Copes Hrs., J. Morin Sur., 3 mi. E of Dibol. S.D. 2,190 ft.
Sewell-Murphy No. 1 Long Bell Lbr. Co., H.&B. Sur., 3 mi. E of Zavalla. Drlg. 40 ft.

Ellis County

C. M. Beckner et al No. 1 H. A. Styles, A. Bullock Sur., 3½ mi. W of Maypearl. S.D. 660 ft.
Compton Oil Co. No. 1 M. L. Van Landingham, O. Wheeler Sur., 3 mi. E of Pluto. S.D. 440 ft.

Falls County

M. A. Hayes No. 1 D. G. Wooten, J. Powell Sur., 8 mi. SE of Zott. S.D. 1,854 ft.
Jack Shaunfield No. 1 Bargonier, J. M. Graham Sur., SE of Chilton. Drlg. 1,003 ft.

Fannin County

H. W. English No. 1 T. W. Ayers, J. D. Seales Sur. Drlg. 500 ft.

Freestone County

Brothers Oil Co. No. 1 P. D. C. Ball, M. Rionda Sur., 5 mi. NW of Butler. Loc.
W. H. Keeling No. 1 Bounds-Longbotham, R. B. Longbotham Sur. S.D. 30 ft.

Grayson County

John Grey No. 1 Freedman, W. S. Reeves Sur., 8 mi. NW of Denison. O.S. 1,357-59 ft.; S.D. 1,381 ft.; S.O.; tstd. S.W.; S.D.; W.O. 1,407 ft.
Jim McMurrey No. 1 Dr. T. J. Long, J. Garland Sur., 2 mi. S of Collinsville; 4,000-ft. test. S.D.O. 3,929 ft.
Prince Bros. No. 1 Williams, S. Nix Sur., 2 mi. NE of Van Alystine. S.D. 1,173 ft.
Ross & Marshall No. 1 J. N. Taylor, W. Moore Sur., 8½ mi. NW of Denison.
Sinclair Prairie Oil Co. No. 1 M. Williams, R. H. Sowell Sur., 1 mi. SW of Collinsville. Rng. csg. to test; T.D. 4,517 ft.; W.O.C. 5,417 ft.

Henderson County

Richards & Holloway, Inc., No. 1 G. E. Murphy, J. M. Gardner Sur., 6 mi. SW of Mabank. T.D. 3,159 ft.; S.I. storage.
Tide Water-Seaboard-Humble No. 1 Lewis, J. K. Stokes Sur., 1 mi. N of Opelika. Drlg. 3,407 ft.
Tide Water-Seaboard-Humble No. 1 Scott, C. Robb Sur., 3 mi. SW of Opelika area. Drlg. 3,625 ft.

Hill County

A. V. Abernathy and L. N. Sanders No. 1 E. M. Farrell, M. Mata Sur., ¼ mi. NE of Mt. Calm. S.D. 935 ft.

Hopkins County

O. P. Vaughn No. 1 H. W. France, J. B. Hill Sur., 2 mi. N of Sulphur Bluff. Drk.

Houston County

G. C. Dixon No. 1 W. Goodman, J. J. Thomas Sur., ¾ mi. E of Lovelady. Drlg. 2,250 ft.

Kaufman County

Sam Knoerr No. 1 J. B. Hunter, P. Walker Sur., 5 mi. S of Trenton. S.D. 3,006 ft.
McGee No. 1 San Antonio Land & Cattle Co., E. Higdon Sur. Drlg. 2,290 ft.
W. G. McGee No. 1 General American Life Ins. Co., John Baker Sur., 6 mi. W of Mabank. T.S. 3,070 ft.; S.O.; bailing 3,093 ft.; S.D. 3,093 ft.
Tyler & Smith No. 1 Trinity farms, G. Crocher Sur., 3½ mi. SW of Mabank. Drk.

Leon County

Humble O. & R. Co. No. 1 L. Campbell, Wm. Little Sur., NE offset to No. 1 Jackson. Abd. loc.
Humble O. & R. Co. No. 1 W. Johnson, W. Little Sur., outpost to Humble-Harris area. T.D. 5,904 ft.; made S.W.; setting whpstk. 5,760 ft.

Limestone County

Albert Baggett No. 1 J. L. Thompson, P. Varela Sur. S.D. 15 ft.
Zephyr Oil Co. No. 1 Carrie Peeples, R. Scott Sur., 1½ mi. SW of Tehucanna. D.&A. (depth not reported).

Nacogdoches County

D. McDaniels No. 1 T. H. Seale, J. A. Cherino Sur., just outside of city limits of Cherino. Rng. csg. 750 ft.

Navarro County

Topaz Oil Co. No. 1 E. Trammel, R. Mathews Sur., 4 mi. NE of Bazzett. Pits.

Rains County

McKinley & Hastings No. 1 McTaggart, B. Milder Sur., 1 mi. W of Emory. S.D. 720 ft.

Red River County

Kansas-Oklahoma Pet. Corp. No. 1 R. H. Ringwald, A. Moore Sur., 3 mi. W of Manchester. S.D.O. 450 ft.

Robertson County

J. E. Cox No. 1 Sandifer, H. Henry Sur., 3½ mi. SE of Franklin. Loc.

Rusk County

Golden Rod Drlg. Co. No. 1 Hall Wood, J. I. Sanches Sur., 1½ mi. NW of Salem. S.D. 4,102 ft.
Hamm & Bogges No. 1 W. G. Ross, J. McCune Sur., 3 mi. NW of Mount Enterprise. Cg. 3,172 ft.

Smith County

O. L. Ross No. 1 W. P. Rushing, J. Herrin Sur., 1 mi. E of Whitehouse. Loc.
J. H. Thomason No. 1 J. W. Bartlett, R. H. Stewart Sur., ½ mi. SE of Jamestown. S.D. 2,004 ft.

Titus County

Superior Oil Co. No. 1 John Hargraves, S. B. Patton Sur., 8 mi. S of Mt. Pleasant. Drlg. 3,900 ft.

Trinity County

McApline No. 1 C. V. Dilley, J. Grissett Sur., 7 mi. N of Trinity. S.D. 2,340 ft.

Van Zandt County

F. A. Richardson No. 1-A B. C. Dodd, T. W. Hutchinson Sur., 2 mi. S of Grand Saline. W.O.C. 4,963 ft.

NORTH TEXAS WILDCATS

Archer County

G. E. Kadane & Sons No. 1 J. Hemmi, Sec. 60, Clark & Plumb Sur., Blk. 3. T.D. 5,314 ft.; 6⅝-in. 5,150 ft.; S.L. 5,174-5,220 ft.; retreated 10,000 gal. acd.; C.O.; tstg. on pmp.

Baylor County

British Am. O. P. Co. No. 1 F. C. Green "L," Sec. 8, H.T.&B. Sur. 6⅝-in. 3,130 ft.; perf. 3,060-65 ft.; S.O.&G.; tstg. after perf.; est. 25 B.P.D.; tstg.

Clay County

L. T. Burns No. 1 E. F. Calloway, Lot 9, Hopkins Co. Sch. Ld. Drlg. 1,310 ft.
L. T. Burns No. 1 J. T. Pickett, W. W. Yearly A-745. R.U.R.&S.D.
L. T. Burns No. 1 C. L. Wynn, H. Williams Sur. A-704. Drlg. 4,465 ft.; had S.S.O. 4,395-4,415 ft.; Schlumberger survey showed some sat.; S.D.O. 5,203 ft.
Consolidated Oil Co. No. 1 A. H. Bevering, Sec. 9, B.B.B.&C. A-69 Sur. Loc.
J. E. Farrell No. 1 C. P. Malone, Sec. 12, T.&N.O. Sur. A-828. S.D.O. 5,550 ft.
Frabar-Hodges and Mid-Union Drlg. Co. No. 1 Mrs. R. C. Kinder, Lot 11, Clark & Plumb Sur., Blk. 2. S.S.O. 5,273-80 ft.; rmg. to D.D.
E. C. Norwood et al No. 1 H. C. Shipley, Sec. 29, Madison Co. Sch. Ld. A-302 Sur. Loc.
Staley Oil Co. No. 1 D. J. Percifield, Sec. 37, Belcher Sub. R.U.R.
Youngblood & Foree No. 1 Mrs. Ida Wynn, Sec. 2, T.&N.O. Sur. A-795. Drlg. 1,725 ft.

Cooke County

Sinclair Prairie No. 10 J. M. Best, T. Toby Sur. A-1054. T.D. 5,643 ft.; P.B. 5,565 ft.; set 5⅛-in. 5,285 ft.; drld. plug and filled up 2,005 ft.; swbg. and C.O.

Hardeman County

Amerada Pet. Corp. No. 1 W. M. Rice, Sec. 81, W.&N.W. Sur. Drlg. 1,125 ft.
M. M. Cooke No. 1 Mrs. M. D. Norton, Sec. 3, E.L.R.R. Sur. Spud and S.D.

Jack County

Samuel Edelman No. 1 A. B. Griffith, S. Tollett A-1436 Sur. R.U.C.T.

Montague County

E. B. Madden No. 1 Smith, H. N. Baker A-49 Sur. Drlg. 2,500 ft.
Sinclair Prairie Oil Co. No. 1 Whaley, Sec. 16, B.B.B.&C. A-86. Sur. Drlg. 4,870 ft.

Wichita County

Hanlon-Buchanan, Inc., No. 1 Fassett & Tuttle "F," D.L.&C. Sur. A-596. 6⅝-in. 4,040 ft.; L.&O.S. 4,061-92 ft.; shot 155 qt.; tstg. est. 100 bbl.; C.O.; tstg.

Wilbarger County

Lawson & Leavell No. 16 W. T. Waggoner A, Sec. 109, H.&T.C. Sur., Blk. 14; 3,500-ft. test. S.D.O. 1,445 ft.

Wise County

H. Jackson No. 1 F. Neeley, Blk. 29, Matagorda Co. Sch. Ld. Spd. and S.D.
H. M. Muse No. 1 F. F. Kaker, Blk. 16, Matagorda Co. Sch. Ld. Pits.

Young County

Hull & Silk No. 1 H. N. Tucker, Sec. 180, T.E.&L. Sur. S.D.O. 5,010 ft.

WEST CENTRAL TEXAS DISTRICT

Brown County

T. W. Allmon No. 1 Almeda Moore, Jesse Williams Sur. No. 144, Abst. 931. S.D.O. 1,375 ft.
Dan Hartzell No. 1 H. D. Browning, Blk. 31, Chas. Messer Sur. No. 127. Drlg. 790 ft.
Lynn No. 1 Nesbitt Rice, M.E.P.&P. Sur., Blk. 25. Drlg. 997 ft.

Callahan County

Bayou Oil Co. No. 1 W. E. Jones, Sec. 84, Comal Co. Sch. Ld. Sur. Loc.
J. W. Dobbs Oil Corp. No. 2 Finley, Sec. 75, Bayland Orphans Home Lds. Skd. rig 50 ft.; S.D. 1,075 ft.
S. Herndon No. 1 W. L. Toland, Sec. 27, Blk. 5, S.P.R.R. Sur. Drlg. 950 ft.
D. B. McCall No. 1 J. E. Woods, Sec. 127, Univ. Lds., Abst. 14. S.D.O. 2,-
E. L. Thomas No. 1 Ramsey, Sec. 104, B.B.B.&C. Sur. D.&A. 1,328 ft.
T. Whitmer No. 1 I. N. Jackson, Sec. 15, E.T.R.R. Sur. Drlg. 572 ft.

Coleman County

Anzac Oil Corp. No. 5-C J. P. Morris, David Bredding Sur. Drlg. 150 ft.
Cooper Oil Co. No. 1 J. P. McCord, Sec. 519, San Augustine Sur. Loc.

Concho County

Clymore Co., Inc., No. 1 Hill, J. Frederick Sur. P.B. 2,000 ft.; S.D.
Floyd Dodson No. 1 Robert Wilson, Thomas Green Sur. Mch.
National Resources No. 1 Armon, Sec. 105, Blk. 72, T.&N.O. Sur. S.D.R. 700 ft.

Eastland County

Aloco Oil Co. No. 1 J. W. Guy, Sec. 32, Blk. 1, H.&T.C. Sur. Drlg. 583 ft.
R. R. Groce No. 1 J. M. Rush, Sec. 130, Blk. 3, H.&T.C. Sur. S.D. 515 ft.
W. T. Luton No. 1 R. Been, Sec. 13, Blk. 3, H.&T.C. Sur. S.D. 258 ft.
John L. Reeves No. 1 Jas. Weaver, Blk. 55, McLennan C.S.L., League 304. D.&A. 1,658 ft.
W. R. Ritchey No. 1 Weddington, Sec. 2054, T.E.&L. Sur. Drlg. 2,800 ft.
W. A. Stiles No. 1 J. Lyerla, SE part of Ussury Sur. No. 20. Rng. 5-in. at 1,-346 ft.

Erath County

Wayne Chandler No. 1 Chandler, J. W. Moore Sur., Abst. 571. Fsg. 4,678 ft.
T. Gray No. 1 C. Young Hrs., NW cor. of Stephen Smith Sur., Abst. 682. Sp. and S.D.
T. G. Jackson No. 1 J. W. Taylor, Prater Sur., Abst. 1029, 4 mi. NE of Desdemona. R.U.M.

Fisher County

Frank Bennett No. 1-A Martin, Sec. 113, Blk. 1, H.&T.C. Sur. Drlg. 3,535 ft.

Hamilton County

Wallace & Vickers No. 1 C. C. Lund, J. P. Bailey Sur. 51. S.D.O. 3,430 ft.

Haskell County

E. W. Marland No. 1 Cobb, Sec. 96, Blk 1, H.&T.C. Sur. Drlg. 2,214 ft.

Jones County

J. L. Douglas No. 1 J. M. Blanton, SW cor. of S. L. Underwood Sur. No. 1. Drlg. 1,610 ft.; no report.
Ed. L. Evans No. 1 B. J. Crier, Sec. 3, B.A.L. Sur. S.D.O. 1,721 ft.; est. 10 B. O.P.D.; installing pump 1,721 ft.
Fain-McGaha Oil No. 1 J. H. Harris, Blk. 79, DeWitt C.S.L. Sur., 5 mi. W. of Akard pool. U.R. 2,470 ft.
Gillespie et al No. 1 J. D. Samples, Sec. 45, Deaf and Dumb Asylum Lds. Drlg. 3,186 ft.
Gregg Oil Co. No. 2 Appling, SW¼ Sec. 32, B.B.B.&C. Sur. Comp.; 345 bbl.; 16 hrs.
E. C. Lawson No. 1 M. M. McNair, Lot 3, Blk. 5, Lawson Sur., 4 mi. SW of Lueders. D.&A. 2,185 ft.
Noark et al No. 1 D. Southard, Sec. 8, D.&D.A. Sur., 2 mi. NW of Griffin pool. U.R. 2,271 ft.
Phillips Pet. Co. No. 1 J. R. Montgomery, Sec. 5, Blk. 16, T.&P. Sur. Drlg. 2,340 ft.
Quality Prod. No. 1 Radford, SE¼ Sec. 20, Blk. 16, T.&P. Sur. Fsg. bit 1,800 ft.
S. B. Roberts Co. No. 1 C. Herndon, Sec. 6, M.E.P.&P. Sur., 2 mi. S of Anson. Drlg. 1,810 ft.
Shaheen & Keeler No. 1 Radford, between Sayles and Akard pools. Drlg. 2,135 ft.
A. H. Tarver No. 1 A. S. Barkley, Sec. 54, Deaf and Dumb Asyl. Lds. C.O. 3,376 ft.

Mills County

D. Lane No. 1 J. W. Spinks, J. Douglas Sur. No. 5. Drlg. 435 ft.

Nolan County

Green & Owens No. 1 Tipton, Sec. 43, Blk. 19, T.&P. Sur. Fsg. csg. 4,464 ft.

Palo Pinto County

Palo Pinto O. & G. Co. No. 1 A. P. Wilbar, Blk. 59, Burleson C.S.L. Drlg. 1,008 ft.

Parker County

Brown-Gardner Bros. No. 1 Gilbert, T.& P. Sur., Abst. 1958. S.D. 2,200 ft.

Shackelford County

Beams Drlg. Co. No. 1 Jackson, Sec. 85, Blk. 12, T.&P. Sur. S.D.O. 1,215 ft.
Fox & Rudd No. 1 Shotwell, Sec. 59, B.A.L. Sur. Fsg. 1,632 ft.
Hedrick Oil No. 1 Carey, Sec. 51, Blk. 14, T.&P. Sur. D.&A. 2,025 ft.
C. R. Schuster No. 1 L. E. DeWitt, Blk. 56, Univ. Lds. R.U.R.

Stephens County

Geo. E. Fagg No. 1 Richardson, Sec. 5, Blk. 31, S.P.R.R. Sur.; 4,000-ft. test. Loc.
Falcon Co. No. 1 B. T. Hopper, Sec. 1142, T.E.&L. Sur. Prep. treat 3,815 ft.
Lone Star Gas Co. No. 1 O'Conner. Drlg. 2,925 ft.
A. G. Swanson No. 1 Veale-Frost, Sec. 37, Blk. 8, T.P. Sur. U.R. 927 ft.
Whittmer O. & G. Co. No. 1 Loving, Sec. 66, B.A.L. Sur.; Ellenburger test to 4,500 ft. Drlg. 2,335 ft.

EAST TEXAS

(Border Counties)

Cass County

Red Iron Drlg. Co. No. 1 N. S. Spearman, Samuel Burnham Sur. Drlg. 3,-202 ft.

Harrison County

Ark. La. Gas Co. No. 1-B Abney, J. J. Blair Sur. Est. 40,000,000 cu. ft. gas; T.D. 5,646 ft.

Marion County—Rodessa

Cable Tool Drlg. Co. No. 1 Sol Smith, 345 ft. WL, 450 ft. SL lse., J. Hanks Sur. T. Gloyd 6,075 ft.; 5½-in. csg. 6,085 ft.; T.D. 6,085 ft.; comp.; 284 bbl. dly.
Magnolia Pet. Co. No. 1 Duncan Est., 216 ft. NL, 1,105 ft. EL lse., T. M. Davis Sur. Prep. acdz. 6,002 ft.

Marion County—Other

M. D. Fitzwater No. 1 Mrs. Mary Duncan, Jesse Fitzgerald Sur. R.U. to resume drlg. 750 ft.

Shelby County

Earl McDaniel No. 1 C. W. McDaniel, Wm. Snider Sur. P.B. to perf. 5,100 ft.; gas-dist. zone; S.D. 6,225 ft.
W. H. Neal et al No. 1 A. McDaniel, 150 ft. SL, 200 ft. EL, Wm. Snider Sur. S.D. 1,510 ft.

WEST TEXAS WILDCATS

Andrews County

Richmond Drlg. Co. No. 1 University, Sec. 25, Blk. 12, Univ. Sur. No report.

Brewster County

H. D. Wilcox No. 2 Kokernot, Sec. 23, Blk. C, J. V. Massey Sur. Drlg. 1,420 ft.

Crane County

P. A. Christian No. 1 M. F. Stephenson, Cert. 2044. W. H. Bates Sur. No. 40. S.D.O. 3,335 ft.
Gulf Oil Corp. No. 5 M. B. McKnight Sec. 1, Blk. 21-B, P.S.L. Sur. C.O. 4,185 ft.

Crockett County

J. S. Pittman No. 1 Corbett-Humble, Sec. 15, Blk. 2-B, G.C.&S.F. Sur. S.D. drill pipe 452 ft.
Steel Dust Oil Co. No. 1 Geo. D. Atwood, Sec. 9, Blk. P.P., T.C.R.R. Sur. Drlg. 853 ft.

Crosby County

Gulf Oil Corp. No. 1-C Swenson, Sec. 95, Blk. 2, H.&G.N. Sur. Fsg. 5,676 ft.

Dickens County

Bond D. Jones No. 1 Ford et al, I.&G.N. Sur. S.D. 3,662 ft.
Humble O. & R. Co. No. 1 Matador Ld. & Cattle Co., Sec. 26, Blk. 1, Shock & Arnold Sur. T.D. 7,074 ft.; drlg. plug 6,925 ft.; P.B. 6,133 ft.; set retainer at 4,996 ft.; squeezed and W.O.C.

Ector County

Barnes-Conklin & White No. 1 T.&P. Lds., Sec. 28, Blk. 45, T.&P. Sur. S.D. 4,752 ft.
J. D. Bodkins No. 1 H. F. Foster, Sec. 12, Blk. 43, T.&P. Sur. Drlg. wtr. well.
R. H. Gill No. 1 J. E. Parker, Sec. 12, Blk. 45, T.&P. Sur. W.O.R. 145 ft.
Sloan & Zook No. 1 J. L. Johnson, Sec. 34, Blk. 43, T.&P. Sur. P.B. 4,170 ft.; tstg. water shutoff.

El Paso County

Tri-State Oil Co. No. 1 Kinkel, R.U.S.T.; to P.B. and sdtrk.; T.D. 3,571 ft.; sidetracking hole 1,925 ft.; S.D. 3,571 ft.

Gaines County

Stanolind O. & G. Co. No. 1 J. B. Rayner, Sec. 3, Blk. 30-C, P.S.L. Sur.; 6,-000-ft. test. W.O.R.

Glasscock County

J. R. Petty No. 1 Joe Blake, Sec. 163, Blk. 29, W.&N.W. Sur. Prep. rng. csg. 1,482 ft.
Shell Pet. Corp. No. 1 A. Neal, Sec. 38, Blk. 33, T.&P. Sur. P.B. 3,125 ft.; prep. test.

Howard County

T. G. Shaw, Tr.-Texas Co. No. 1-B Wilkinson, Sec. 19, Blk. 34. D.&A. at 4,704 ft.

Hudspeth County

Haymon Krupp Oil & Ld. Co. No. 1 Thaxton, SE¼ Sec. 34, Blk. 74, Twp. 6. S.G. 6,340-45 ft.; T.D. 6,402 ft.
Haymon Krupp No. 1 Briggs, Sec. 24, Blk. 73, Twp. 7, T.&P. Sur. Drlg. 5,600 ft.

Lynn County

John L. Baldridge No. 1 Alma Lbr. Co., Sec. 151, H.E.&W.T. Sur. S.D.O. 4,450 ft.

Pecos County

L. Cain No. 1 Masterson-Lehn, Sec. 71, Blk. 10, H.&G.N. Sur. Drlg. 1,550 ft.
Greene & Goodman No. 1 Masterson, Sec. 105, Blk. 10, H.&G.N. Sur. S.D.R. 1,365 ft.
Leidecker & Cain No. 1 M. M. Lehn, Sec. 71, Blk. 10, H.&G.N. Sur. Csg. 1,743 ft.; flwg. 20 B.O.; 24 hr.; tstg. 1,783 ft.
Lloyd-Penn & Hargraves No. 1 H. E. Bonebrake, Sec. 110, Blk. 8, H.&G.N. Sur. Drlg. 550 ft.
O. E. Schade No. 1 Otis Garrett, Sec. 59½, Blk. 8, H.&G.N. Sur. Tstg. est. 35 B.O.P.D.; T.D. 2,290 ft.; swbg. est. 20 B.O.P.D.; 5 B.W.P.D.; testg. on pmp.; S.D. 2,290 ft.
Superior Oil Co. No. 1 V. W. Crockett, Sec. 7, Blk. 110, T.C.R.R. Sur. C.&P.
Superior Oil Corp. No. 1 V. W. Crockett, Sec. 5, Blk. 110, T.C.R.R. Comp. 20 B.O.P.D.; T.D. 1,447 ft.
S. Thompson No. 1 Elsinore Cattle Co., Sec. 54, Blk. D, G.C.&S.F. Sur. Rig burned; dropped bailer in hole; S.D.O. 7,342 ft.
J. C. Trees No. 1 fee, Sec. 63, Blk. 3, H.&G.N. Sur. Tstg. on pmp.; est. 5 B. O.P.D. and 5 B.W.P.D.; S.D.O. 2,359 ft.
C. W. Williams No. 1 J. Eaton, Sec. 1, Blk. 203, J. H. Handy Sur. Prep. P.B. to 1,700 ft.
C. W. Williams No. 1 T.&P. Ld., Sec. 95, Blk. 3, T.&P. Sur. D.&A. at 1,845 ft.

Presidio County

L. C. Brite No. 4 fee, Sec. 113, Blk. 12, G.H.&S.A. Sur. D.&A. at 5,602 ft.
Marfa Oil Co. No. 1 Fischer ranch, Sec. 31, Blk. 8, G.H.&S.A. Sur. M.I.M.
H. D. Wilcox No. 2 Jones-Coffield, Sec. 308, Blk. 4, H.&T.C. Sur. C.O. 1,840 ft.

Reeves County

Artie Baker No. 1 J. W. Grider, Sec. 31, Blk. 58, P.S.L. Sur. S.D.R. 450 ft.
Forest Development Corp. No. 1 I. E. Scott, Sec. 286, Blk. 13, H.&G.N. Sur. M.I.R.

Scurry County

J. B. Stoddard No. 1 R. O. McClure, Sec. 142, Blk. 97, H.&T.C. Sur. Prep. shoot 2,490 ft.
H. C. Wheeler No. 1 M. Sims, Sec. 141, Blk. 97, H.&T.C. Sur. Tstg. 18 B.O. in 17 hrs. 2,509 ft.; tstg. on pump.

Stonewall County

Forest Dev. Co. and King Drlg. Co. No. 1 Moreland, Sec. 183, Blk. D, H.&T. C. Sur. D.&A. at 5,545 ft.

Tom Green County

Southern Cross No. 1 Upton & Upton, Sec. 20, Blk. A, A.B.&M. Sur. Pulling 7-in.; will R.U.R.
Spinner No. 1 Reed, Mason Ferry Ranch Sur. S.D.O. 5,803 ft.; tools out of hole.

Ward County

Magnolia Pet. Co. No. 1-44 Sealy, Sec. 44, Blk. F, G.M.M.B.&A. Sur. Drlg. 200 ft.

Yoakum County

W. A. Hudson No. 1 J. D. Webb, Sec. 545, Gibson Sur. Cmtd. whipstock 4,500 ft.; drlg. by at 4,900 ft.

TEXAS PANHANDLE

Armstrong County

Holmes, Newblock & Haley No. 1 Ed Moore, Sec. 319, Blk. 4-B, H.&G.N. Sur. Strghtng. hole 865 ft.

Castro County

English et al No. 1 Gundlach, NW¼ Sec. 145, Blk. 6-M, S.K.&K. Sur. Loc.

Collingsworth County

Johnson No. 1 Taylor, Sec. 10-17, H.&G. N. Sur. T.A. 875 ft.

Deaf Smith County

Uscan No. 1 Farwell, Sec. 18, Blk. 3, X. Sur. U.R. 5,626 ft.

Gray County

Products O. & G. Co. No. 1 Mason Davis, Sec. 23, Blk. 23-M, H.&G.N. Sur. Loc.

Lipscomb County

Phil O'Neil No. 1 J. Kock, NW SW Sec. 539, Blk. 43, T.&T.C. Sur. S.D. 480 ft.

Roberts County

E. J. Dunigan, Jr., No. 1 Ledrick, Sec. 34, Blk. C, G.&M. Sur. Drlg. 3,725 ft.

CALIFORNIA GAS

(Continued from Page 33)

Buttonwillow geological data was prepared by L. S. Chambers, of Seaboard Oil Corp., for Division of Mines bulletin on "Geologic Formations and Economic Development of California Oil and Gas Fields," and is published with permission of Olaf P. Jenkins, state geologist. The gas produced is almot pure methane, without a trace of the heavier hydrocarbons. Gas has shown the same analysis for all zones developed to date, as follows:

CH_4, per cent	98.8
CO_2, per cent	.04
N_2, per cent	.08
Specific gravity by balance	.563
Calorimeter B.t.u.	985
Calculated B.t.u.	991

WELLS DRILLED IN BUTTONWILLOW GAS FIELD

Kern County, California

Company—	Well number	Location S.T.R.	Depth Total	Depth Effective	Status	Initial production M.c.f.	Date completed
General Petroleum Corp.	1 Morris	6-28-23	3,095	Same	Gas well	10,000	September 7, 1932
General Petroleum Corp.	2 Morris	6-28-23	2,494	Same	Gas well	10,500	October 30, 1932
Seaboard Oil Corp. (Milham)	1 Crites	8-28-23	4,496	Same	Gas well	12,850	August 30, 1932
Seaboard Oil Corp. (Milham)	1 Hume	8-28-23	2,676	Same	Gas well	7,800	July 7, 1928
Seaboard Oil Corp. (Milham)	1 Harris	8-28-23	2,673	Same	Gas well	10,500	February 28, 1929
Seaboard Oil Corp. (Milham)	1 K.C.L.	8-28-23	3,310	Same	Discovery well*	None	November 3, 1926
Seaboard Oil Corp. (Milham)	1-A K.C.L.	8-28-23	4,661	Same	Gas well	7,500	June 1, 1931
Seaboard Oil Corp. (Milham)	2 K.C.L.	8-28-23	2,738	Same	Gas well	27,750	January 16, 1928
Seaboard Oil Corp. (Milham)	3 K.C.L.	8-28-23	2,694	Same	Gas well	8,450	February 26, 1928
Seaboard Oil Corp. (Milham)	4 K.C.L.	5-28-23	2,670	Same	Gas well	20,000	April 7, 1928
Seaboard Oil Corp. (Milham)	5 K.C.L.	5-28-23	3,127	2,716	Gas well	20,000	May 19, 1928
Seaboard Oil Corp. (Milham)	6 K.C.L.	8-28-23	4,946	Same	Abandoned	None	June 1, 1931
Seaboard Oil Corp. (Milham)	7 K.C.L.	5-28-23	3,522	Same	Abandoned	None	December 6, 1938
Seaboard Oil Corp. (Milham)	9 K.C.L.	5-28-23	2,625	Same	Abandoned	No gas	April 15, 1933
Seaboard Oil Corp. (Milham)	10 K.C.L.	5-28-23	2,690	Same	Gas well	6,000	February 21, 1932
Seaboard Oil Corp. (Milham)	12 K.C.L.	8-28-23	2,553	Same	Gas well	14,550	December 28, 1933
Seaboard Oil Corp. (Milham)	1 Lincoln	6-28-23	2,467	Same	Gas well	12,850	December 6, 1933
Seaboard Oil Corp. (Milham)	1 Page	6-28-23	3,221	Same	Gas well	2,500	September 7, 1931
Seaboard Oil Corp. (Milham)	1 Sissons	6-28-23	2,552	Same	Gas well	12,000	December 7, 1932
Seaboard Oil Corp. (Milham)	21-7 S.P.	7-28-23	2,620	Same	Gas well	12,600	February 16, 1933
Seaboard Oil Corp. (Milham)	32-7 S.P.	7-28-23	2,491	Same	Gas well	8,275	June 21, 1932
Seaboard Oil Corp. (Milham)	41-7 S.P.	7-28-23	2,573	Same	Gas well	8,250	May 28, 1932
Seaboard Oil Corp. (Milham)	14-9 S.P.	9-28-23	2,670	Same	Gas well	6,500	May 3, 1932
Seaboard Oil Corp. (Milham)	43-1 S.P.	1-28-22	2,524	Same	No gas	None	Suspended
Seaboard Oil Corp. (Milham)	41-17 S.P.	17-28-23	2,648	2,498	Wet	No gas	Suspended
Seaboard Oil Corp. (Milham)	41-1 S.P.	1-28-23	2,511	Same	Gas well	30,750	December 29, 1932
Seaboard Oil Corp. (Milham)	14-31 S.P.	31-27-23	2,519	Same	Gas well	12,800	January 17, 1933
Seaboard Oil Corp. (Milham)	1 Whitaker	8-28-23	2,675	Same	Gas well	4,155	March 14, 1932
Seaboard Oil Corp. (Milham)	2 Whitaker	8-28-23	2,600	Same	Gas well	14,750	October 26, 1932
Seaboard Oil Corp. (Milham)	3 Whitaker	8-28-23	2,550	Same	Gas well	13,250	February 7, 1933
Seaboard Oil Corp. (Milham)	1 Arlington	6-28-23	3,235	Same	Gas well	10,640	August 21, 1935
Texas Co.	1 Sears	6-28-23	2,435	Same	Gas well	10,500	August 28, 1935
Texas Co.	1 Whiting	8-28-23	2,475	Same	Gas well	19,425	September 17, 1935

*Note: Seaboard Oil Corp. No. 1 K.C.L. blew out and caught fire.

WEST CENTRAL TEXAS COMPLETIONS

(24-hour gages)

Andrews County

Sinclair Prairie Oil Co. No. 6 E. Cowden, 4,169-4,250 ft., 1,608 bbl.

Concho County

Clymore Co., Inc., No. 1 Hill, dry and abandoned at 2,565 ft.

Crane County

Gulf Oil Corp. No. 196 McElroy, 2,685-2,900 ft., 1,354 bbl. T. B. Knox No. 1 University, 2,998-3,135 ft., 127 bbl. J. E. Mabee No. 12 McClintic, 2,850-3,100 ft., 386 bbl.

Ector County

Arkansas Fuel Oil No. 4-B Johnson, 4,100-4,222 ft., 990 bbl. Gulf Oil Corp. No. 198 Goldsmith, 4,151-91 ft., 385 bbl. Gulf Oil Corp. No. 200 Goldsmith, 4,169-4,214 ft., 1,511 bbl. Gulf Oil Corp. No. 202 Goldsmith, 4,123-91 ft., 96 bbl. Gulf Oil Corp. No. 1 O. B. Holt, 5,148-68 ft., 217 bbl. Llano Oil Co. No. 1-B Holt, 4,153-4,214 ft., 810 bbl. Ohio Oil Co. No. 5 Cummins, 4,150-4,212 ft., 210 bbl. Phillips-Pure No. 63 C. Cowden, 4,115-70 ft., 1,388 bbl. Stanolind Oil & Gas Co. No. 21-A E. F. Cowden, 4,050-4,200 ft., 776 bbl. Stanolind Oil & Gas Co. No. 16 Witcher, 4,015-4,210 ft., 856 bbl. Stanolind Oil & Gas Co. No. 18 Witcher, 4,030-4,200 ft., 888 bbl.

Gaines County

Phillips Petroleum Co. No. 2 Loffland, 4,855-4,995 ft., 638 bbl.

Hockley County

Texas Co. No. 6 Bob Slaughter, 4,868-4,980 ft., 1,203 bbl.

Howard County

Parker Drilling Co. No. 2-B T.&P. Ld. Tr., dry and abandoned at 2,840 ft. T. G. Shaw No. 1-B Wilkinson, dry and abandoned at 4,704 ft.

Pecos County

British American Oil Co. No. 25 Payton, 1,934-94 ft., 81 bbl. Childress Realty Co. No. 9 Masterson, 1,470-85 ft., 236 bbl. Letwin-Lippett & Kallison No. 3-D University, 1,685-1,762 ft., 98 bbl. Superior Oil Co. No. 1 V. W. Crockett, 1,422-47 ft., 20 bbl. S. P. Williams No. 1-A University, dry and abandoned at 1,845 ft.

Ward County

Columbia Oil & Gas Co. No. 5-B Johnson, location abandoned. Columbia Oil & Gas Co. No. 3-C Johnson, 1,965-2,051 ft., 81 bbl. Gulf Oil Corp. No. 120 Estes, 2,530-2,640 ft., 552 bbl. Magnolia Petroleum Co. No. 5-45 Sealy, dry and abandoned at 3,083 ft. Magnolia Petroleum Co. No. 6-45 Sealy, location abandoned.

Presidio County

Lee C. Brite No. 4 fee, dry and abandoned at 5,602 ft.

Stonewall County

Forest Development Co. and King Drilling Co. No. 1 Moreland, dry and abandoned at 5,545 ft.

Tom Green County

Lynn & Cobb No. 1 T. B. Knox, location abandoned.

Upton County

Gulf Oil Corp. No. 102 McElroy, 2,931-58 ft., 230 bbl. (old well plugged back).

Winkler County

Stanolind Oil & Gas Co. No. T-89-C-1 Hendricks, 2,824-3,040 ft., 70 bbl. W. K. Realty Co. No. 6-C Walton, 2,885-3,055 ft., 1,012 bbl.

Yoakum County

Fred M. Allison No. 3 R. Bennett, 4,984-5,232 ft., 1,910 bbl. Aloco Oil Co. No. 1 J. T. Herd, 4,832-5,157 ft., 54 bbl. Aloco Oil Co. No. 2 Nystel, 4,980-5,143 ft., 950 bbl. Devonian Oil Co. No. 5 Hodges, 4,995-5,225 ft., 1,403 bbl. Shell Oil Co., Inc., No. 5-C Baumgart, 4,860-5,171 ft., 1,132 bbl. Texas Pacific Coal & Oil Co. No. 2 Cecil-Bloomer, 4,940-5,130 ft., 1,192 bbl. Tide Water Associated Oil Co. No. 1-B R. M. Kendricks, 4,995-5,140 ft., 1,015 bbl. Skelly Oil Co. No. 5 C. A. Thomas, 4,914-5,149 ft., 1,006 bbl.

McAllen May Call Election On Municipal Plant

McALLEN, Tex.—Mayor Horace Etchison says an election will be called this summer on a bond issue for financing either the purchase of the present Rio Grande Valley Gas Co. system or build a competing system. At the request of the city, the Railroad Commission recently made a survey of local gas rates and a report is expected in a few weeks. Regardless of what the Railroad Commission finds, the city commission has agreed the time has come for the city to go into the gas business, Mayor Etchison declared.

The controversy began a year ago when the valley mayors association made demands that the company reduce its rates. The company replied it could not unless the consumers were greatly increased. Last fall the city was offered 3,000,000 cu. ft. of gas free from the E. M. Card well on the outskirts of the city. The city contemplates using the gas from this well if the bonds are approved.

WASHINGTON

(Continued from Page 31)

If the reverse is the case and the price has declined from $2 per unit to $1 there is no actual loss since the inventory can be replaced at $1 per unit. It has been predicted that the new accounting method, if widely used, will tend to stabilize markets since there will be no inducement to build excessive inventories when prices are rising.

Mining Claims

THE Senate has passed a bill (S. 878) introduced by Senator Joseph C. O'Mahoney of Wyoming to validate the prospecting permits of about 100 oil and gas claims on public lands. By an act of August 26, 1937, Congress provided for the extension to December 31, 1939, of various classes of oil and gas prospecting permits, including the class in which at least one well was drilled to a depth of not less than 2,000 ft. subsequent to August 31, 1935. The Department of the Interior interpreted this as preventing the extension of permits upon which wells had been drilled to a depth of 2,000 ft. subsequent to August 26, 1937, even though the permits were in good standing, but upon which discovery had not been made prior to December 31, 1938. The bill permits the extension of those permits, estimated at less than 100 in number, upon which at least one well was drilled to a depth of not less than 2,000 ft. subsequent to August 31, 1935, and prior to January 1, 1939.

The House has passed a bill (H.R. 6560) introduced by Representative Edward T. Taylor of Colorado, to amend federal leasing laws to provide that placer mining claims for oil, oil shale, gas and certain other minerals will automatically revert to the public domain unless the claimholder files an annual statement that he has performed the required $100 worth of improvements. This annual assessment work is already required by the law but the Supreme Court has held that there is no way of enforcing this requirement.

Conservation Legislation

RENEWAL of the Interstate Oil Compact has been recommended by the House committee on interstate and foreign commerce. Congressional approval of the extension of the compact was recommended by President Roosevelt and the necessary legislation is expected to be enacted as a routine matter prior to the extension of the present compact on September 1.

A special resolution appropriating $20,000 to enforce the Connally hot oil law during July was rushed through Congress in the closing session of the fiscal year on June 3. Provision for enforcement of this law by the Petroleum Conservation Division and the Federal Tender Board was not included in the regular appropriation law for the Department of the Interior because of the fact that the Connally law was due to expire on June 30, and Congress has no power to appropriate money for activities not authorized by substantive legislation. Since President Roosevelt did not sign the bill extending the Connally law for 3 years until June 29 it was impossible to appropriate for its enforcement. Before the end of July there will be another deficiency appropriation bill which will undoubtedly include funds for the enforcement of the Connally law for the balance of the fiscal year, since the Budget Bureau has approved an estimate of $230,000 for this purpose.

Market Record of Active Oil Stocks

Compiled by Carl H. Pforzheimer & Co., 25 Broad Street, New York City, Member New York Stock Exchange and New York Curb Exchange

New York Stock Exchange

1939 High	1939 Low	Week ending July 8 High	Week ending July 8 Low	Week ending July 8 Close	Stocks—	Total shares outstanding	Par value	Latest dividend	Payable or last paid	Dividends paid in 1938	Com. sh. earn. 1938	Com. sh. earn. 1937	1938 High	1938 Low	1937 High	1937 Low
70	50	64	63	63	Amerada Corp.	788,675	N.P.	50cQ	7-1-39	$2.00	$2.07	$3.04	78	55	111⅞	51½
23½	18½	20½	19⅞	19⅞	Atlantic Refining	2,663,999	$25	25cQ	6-15-39	1.00	1.40	3.51	27⅞	17¾	37	18
21½	10⅞	12	11½	11⅞	Barber Asphalt Co.	390,223	$10	75c	12-16-37	....	—.85	1.91	23¾	12½	43⅜	10⅛
19½	12⅜	13⅝	13⅛	13⅜	Barnsdall Oil Co.	2,250,344	$5	25cQ	2-1-39	1.00	1.26	.85	21⅜	10⅛	35¼	10
9¼	7	7⅞	7⅝	7¾	Consolidated Oil Corp.	13,751,846	N.P.	20cQ	8-15-39	.80	.55	1.48	10¾	7	17⅞	7
31½	20½	23	21	22⅜	Continental Oil of Delaware	4,682,581	$5	25cQ	6-27-39	‖1.00	1.10	2.98	35⅜	21¼	49	24
8⅜	4⅜	5⅜	5¼	5⅜	Houston Oil (new)	1,098,618	$25	....	10-17-30	....	.83	.94	9⅜	5	17⅝	4⅜
20¼	12⅜	14	14	14	Lion Oil Refining	435,815	N.P.	25cQ	4-20-39	1.00	2.09	2.17	25⅛	15⅝	34	12½
16½	11⅛	13¼	12⅛	12¾	Mid-Continent Petroleum	1,857,912	$10	25c	6-1-39	.60	.56	2.86	22⅝	12¼	35⅜	14
14⅞	10⅜	10½	10½	10½	Mission Corporation	1,379,245	$10	25c	6-29-39	1.00	1.04	1.31	17¾	10⅝	34	15
15½	6½	7¼	7⅛	7⅛	National Supply	1,155,517	$10	$2 pf.‡	12-22-37	....	—.79	4.90	28	12½	41⅜	17⅝
10¼	6⅝	6⅞	6⅝	6¾	Ohio Oil Co.	6,563,377	N.P.	20c	12-15-38	.20	.25	1.30	14⅜	8⅜	22⅞	8
11⅞	8⅞	9	8⅞	9	Pacific Western Oil	1,000,000	N.P.	50c	12-20-38	.50	1.22	1.39	15⅞	10¼	29¾	11⅜
6¾	5¼	..	..	..	Pan American Pet. & Trans.	4,702,945	$5	$1*	12-21-37	....	.08	1.18	9¼	6¼	17⅛	7
43¾	31¼	33⅝	32⅞	33⅛	Phillips Petroleum	4,449,052	N.P.	50cQ	6-1-39	‖2.00	2.03	5.42	44⅜	27¼	64	30⅛
22½	17¼	19¾	19	19	Plymouth Oil Co.	1,006,200	$5	35cQ**	6-30-39	1.40	2.59	2.85	25⅝	15	29⅞	13
11¼	6⅝	7	6⅝	6⅞	Pure Oil Co.	3,982,031	N.P.	25c	12-1-37	....	.38	2.15	13½	8¼	24⅝	8⅜
10¼	6⅝	7⅞	7⅛	7½	Richfield Oil Corp.	4,010,000	N.P.	50c	12-21-38	.50	.51	.35	9⅞	5	6½	4⅛
22⅜	16⅛	17¾	17⅜	17⅜	Seaboard Oil of Delaware	1,244,383	N.P.	25cQ	6-15-39	1.00	1.52	1.97	27½	15½	54⅛	16
15⅛	10⅛	10⅞	10⅛	10⅞	Shell Union Oil	13,070,625	N.P.	25c	7-20-39	.70	.72	1.44	18⅜	10	34⅜	14⅞
29½	18½	19⅜	19¼	19⅜	Skelly Oil	995,349	$15	50c	12-15-38	1.00	2.27	6.07	34⅜	18½	60⅝	26½
13¾	10½	11⅝	11⅛	11¼	Socony-Vacuum	31,206,071	$15	25cSA	3-15-39	.50	1.29	1.82	16⅜	10¾	23¼	13
30⅛	25⅛	26½	25⅝	25¾	Standard Oil of California	13,004,153	N.P.	30cQ†	3-15-39	1.40	2.22	3.17	34⅞	25½	50	27⅛
29⅛	23¼	24⅞	24⅛	24⅜	Standard Oil (Indiana)	15,272,020	$25	25cQ	6-15-39	1.00	1.82	3.66	35½	24¾	50	26½
50⅝	46	46	46	46	Standard Oil of Kansas	106,190	$10	$2	12-8-38	2.00	5.25	6.93	50¼	32½	43	30⅝
53¼	40⅛	42	40¾	41¾	Standard Oil of New Jersey	26,618,065	$25	50c§	12-15-38	§1.50	2.86	5.64	58⅜	39¾	76	42
66	46	51	50⅛	50⅛	Sun Oil	2,316,484	N.P.	25cQ	6-15-39	1.00	1.07	3.86	65½	45	77½	44½
3⅛	2	2	2	2	Superior Oil Corp.	1,388,979	$1	10c	12-28-38	.10	.24	.32	4¼	1¾	7⅝	1½
48¼	34⅞	36½	35⅞	36¼	Texas Corp.	10,876,882	$25	50cQ	7-1-39	2.00	2.13	5.02	49⅝	32⅝	65½	34¾
5⅜	3½	3¾	3¾	3¾	Texas Gulf Producing Co.	888,142	N.P.	10c	6-15-39	.15	.86	.08	5⅞	2⅝	9⅝	2
10⅛	7½	7⅝	7⅝	7⅝	Texas Pacific Coal & Oil	888,236	$10	10c	6-1-39	.40	1.16	1.11	12½	7	16⅝	5⅝
14¼	11¼	12	11⅝	11⅞	Tide Water Associated	6,375,253	$10	25c	6-1-39	1.00	1.28	2.08	15⅜	10⅛	21⅝	13⅛
19¾	17⅛	16⅜	16⅛	16⅛	Union Oil of California	4,666,270	$25	25c	8-10-39	1.20	1.47	2.58	22½	17⅛	28¼	17½
23⅝	20⅛	22½	21¾	22½	Union Tank Car Co.	1,177,381	N.P.	30cQ	3-1-39	1.30	1.16	1.70	23½	20	31½	22
3¾	2½	2¾	2¾	2¾	Wilcox Oil & Gas	487,568	$5	....	5-10-28	....	.52	.24	3½	1⅝	6¼	1⅜

*Payable in 3½ per cent notes. †Includes extras. ‡One-tenth share $2 preferred stock. §Also 1½ per cent stock dividend. ‖Also right to subscribe to bonds. ¶Also 1 per cent in stock. **Also 2 per cent in stock. —Deficit.

New York Curb Exchange

1939 High	1939 Low	Week ending July 8 High	Week ending July 8 Low	Week ending July 8 Close	Stocks—	Total shares outstanding	Par value	Latest dividend	Payable or last paid	Dividends paid in 1938	Com. sh. earn. 1938	Com. sh. earn. 1937	1938 High	1938 Low	1937 High	1937 Low
9	5½	6¼	6¼	6¼	American Republics Corp.	1,308,049	$10	10c	7-11-38	$0.10	—$0.22	$0.27	11¾	5	10	6⅝
7¼	3½	4	3¾	4	Bridgeport Machine Co.	270,000	N.P.	$1.25	12-30-37	....	—.14	1.90	10¼	4⅞	21⅝	7
34¾	27¼	..	..	..	Buckeye Pipe Line Co.	200,000	$50	50c	3-15-39	2.00	2.36	4.02	39	22½	51½	36
130	110	..	..	..	Chesebrough Mfg. Co.	120,000	$25	$1.50Q†	6-26-39	6.50	5.32	6.73	128	97	112	95½
9¼	5½	5¾	5⅝	5¾	Cities Service (new)	3,704,067	$10	....	6-1-32	....	.23	1.02	11	5½	5⅝	1⅛
1½	½	1⅜	1¼	1¼	Cosden Petroleum	462,551	$1	....	.....	....	....	.19	2⅜	⅞	5½	1⅛
23¾	16¾	18½	18	18	Creole Petroleum	6,975,383	$5	50cSA†	6-15-39	1.00	1.64	1.61	27½	17½	38⅝	20¼
7⅛	4⅜	4½	4½	4½	Darby Petroleum	351,390	$5	25cSA	1-15-39	.50	....	1.36	10¼	5½	18⅝	6½
2⅜	1⅝	..	..	..	Derby Oil & Refining	263,162	N.P.	....	.....	....	—.91	1.34	3½	1½	8⅜	2¼
20	15½	15¾	15¾	15¾	Eureka Pipe Line	50,000	$50	50c	8-1-39	3.00	—.37	—.12	31	16	47½	24½
40	29¼	32	31½	31½	Gulf Oil Corp.	9,076,202	$25	25cQ	7-1-39	1.00	1.43	3.51	46⅞	33	63½	33
69⅜	53	58¾	58	58	Humble Oil & Refining	8,987,840	N.P.	37½c	7-2-39	3.00	3.98	5.22	72⅝	56	87	54⅞
17	14	14⅞	14	14¾	Imperial Oil of Canada	26,965,078	N.P.	62½cSA†‡	6-1-39	1.25	.96	.98	19½	14⅛	24¼	14½
7	5⅝	6½	6¼	6½	Indiana Pipe Line	300,000	$10	30c	5-15-39	.50	.47	1.03	9⅜	6	15	5⅞
27½	20¼	21⅜	20¼	21⅜	International Petroleum	14,324,088	N.P.	1.00†‡	6-1-39	2.50	1.98	....	31¼	21	39½	23½
3½	2¼	..	..	..	Kirby Petroleum Co.	500,000	$1	10c	4-15-38	.10	.14	.17	5	2⅛	8⅜	2⅝
9½	7⅛	9	8⅞	9	Lone Star Gas	5,553,747	N.P.	20c	4-20-39	.60	.88	1.14	10⅜	6⅝	14¼	5¼
7⅞	4⅞	5⅛	5	5⅛	Louisiana Land & Exp.	2,977,449	N.P.	10cQ	3-15-39	.45	.45	.58	9⅜	6½	15¼	6¾
17	15	..	..	..	Margay Oil Corp.	149,943	N.P.	25cQ	4-10-39	1.00	2.28	3.26	24	16	33½	17
8⅜	7	7¼	7¼	7¼	Midwest Oil Co.	998,474	$10	50c	12-15-38	1.00	.93	1.14	9¾	6⅝	14⅝	6¼
5½	4⅞	5⅛	5⅛	5⅛	Mountain Producers	1,593,584	$10	30cSA	6-15-39	.60	.62	.76	5¾	4½	7⅞	4⅛
13¼	11¼	11½	11½	11½	National Fuel Gas	3,810,183	N.P.	25cQ	4-15-39	1.00	.84	.96	14⅝	11½	19½	12
8½	7¼	8⅛	8⅛	8⅛	National Transit	509,000	$12.50	35c	6-15-39	.75	.88	1.19	9¼	6½	12½	7¼
1¾	1½	1½	1½	1½	New Mexico and Arizona	1,000,000	$1	1c	12-1-37	....	.02	.02	2⅝	1½	5	1⅛
4⅞	4	..	..	..	New York Transit	100,000	$5	15c	4-15-39	.25	.16	.49	4½	3½	5⅝	3⅞
6	4½	5½	5½	5½	Northern Pipe Line	120,000	$10	15c	6-1-39	.35	.24	.78	6	4	12⅜	5⅜
7⅝	4¼	5⅜	5⅛	5⅜	Pantepec Oil	2,857,000	$1	....	.....	....	....	....	7⅜	3½	9⅝	2⅜
2¾	1¾	1¾	1⅝	1¾	Root Petroleum Co.	336,045	$1	25c	2-1-37	....	.17	—.17	4½	1⅝	12⅜	2
3	2	..	..	..	Ryan Consolidated	298,931	N.P.	....	.....	....	.29	.46	4	2⅛	6½	2¼
4	3½	..	..	..	Southern Pipe Line	100,000	$10	15cSA	3-1-39	.30	—.27	.85	5⅜	3¼	7¼	3⅞
34⅞	27¾	..	..	..	South Penn Oil	1,000,000	$25	37½cQ	3-31-39	1.75	1.44	4.64	39	28¾	56	35
19¾	18	18	18	18	Southwest Penna. Pipe Lines	35,000	$50	50cQ	7-1-39	2.00	—.41	.95	22¼	16½	42	20
18¾	17¼	18	17⅞	18	Standard Oil of Kentucky	2,604,790	$10	25c	6-15-39	1.25	1.45	1.60	18¾	15	21½	17¾
11	6	11	9¼	11	Standard Oil of Nebraska	161,403	$25	25c	3-29-37	....	—.69	—.58	8¾	5½	13¾	8
21¼	17	20¼	20¼	20¼	Standard Oil of Ohio	753,740	$25	25c	3-15-39	1.00	1.81	3.67	22⅜	16¼	45	16
2⅝	1⅞	2	1⅞	1⅞	Sunray Oil	2,007,076	$1	5c	4-27-39	.05	.23	.42	3¼	2	4⅞	2
4	2⅝	3	2⅞	3	Texon Oil & Land	936,024	$2	10c	6-30-39	.60	.56	.51	5¼	3½	7⅝	2
5½	2½	3⅜	3½	3⅜	Transwestern Oil Co.	750,000	$10	....	.....	....	—.12	.48	7⅝	4¼	13⅞	4⅝
3⅜	1⅝	1¾	1⅝	1¾	United Gas Corp.	7,818,959	$1	....	.....	....	—.51	25	5¼	2⅝	13⅞	3

†Includes extras. ‡Payable in Canadian funds. ¶Of which $1 was in preferred stock. —Deficit.

Personal Paragraphs

HAROLD LOVEJOY, assistant secretary of Seaboard Oil Co., Dallas, Tex., is in New York on vacation visiting the fair.

RALPH TALLEY, superintendent of the land and lease department for Magnolia Petroleum Co., Dallas, Tex., has left with his family for 3 weeks' vacation in the mountains of Colorado.

JOHN BURR has been transferred from Bayway to 30 Rockefeller Plaza, New York, to act as a contact with the industrial relations offices of operating subsidiary companies here and abroad of Standard Oil Co. of New Jersey. K. E. YANDELL, formerly assistant to Mr. Burr, fills the post vacated at Bayway.

DICK SCHWAB, independent operator of Houston, Tex., left last week for a vacation trip to Colorado.

H. B. HUMPHREY, with the U. S. Bureau of Mines, has been transferred from Juneau, Alaska, to San Francisco.

E. R. TURNER, vice president and general manager of Pan American Production Co. in Houston, Tex., has returned from a business trip to New York.

JOE H. RUSSELL, in charge of producing operations for Gulf Oil Corp. in Texas, Louisiana, Arkansas, and Mexico, has been made chairman of the Community Chest campaign in Houston, Tex.

F. R. WADE, son of the president of Southern Counties Gas Co. and himself an employe of the company, and ROBERT SALISBURY, of Gilmore Oil Co., with their brides left Los Angeles Harbor this week on the liner Lurline for Honolulu.

W. L. STEWART, JR., vice president of Union Oil Co. of California, is skippering his 67-ft. yawl Chubasco, in the yacht race from San Francisco to Honolulu. E. W. PAULEY, president of Petrol Corp., and his brother, H. R. PAULEY, vice president, comprise part of the crew of the former's 84-ft. schooner, Fandango. At last reports Mr. Stewart's Chubasco was out in front, but none of the contenders had yet encountered the trade winds which were expected to step up the speed.

R. H. LACKEY, JR., has become administrative assistant to C. E. SHAW, manager of Standard Oil Co. of New Jersey industrial relations department.

H. W. NEWELL, Cleveland, Ohio, a student of geology at Harvard University, has joined the geological staff of American Liberty Oil Co., Dallas, Tex.

W. S. UNDERWOOD, chief clerk in the Pure Oil Co.'s Tulsa office, has gone to Van, East Texas, to fill the same post there, replacing KENT KIRKMAN, who went to Saginaw, Mich. LEO K. HUGHES, formerly chief clerk in Saginaw, has taken Mr. Underwood's place in Tulsa. The transfers were in conformity with a Pure Oil rule which permits chief clerks in the production department to exchange positions.

T. R. ARMSTRONG, vice president of several foreign subsidiaries of Standard Oil Co. of New Jersey, returned last week from a visit to Venezuela.

M. G. GAMBLE, JR., has been appointed manager of the marine department of Standard Oil Co. of New Jersey's subsidiary in Aruba, succeeding Capt. Robert Rodger, who retired under the company's annuity plan.

C. MUSGRAVE, vice president of Phillips Petroleum Co., with offices in Bartlesville, Okla., spent a week's vacation in southern California en route to the annual meeting of the Association of Traffic Clubs in San Francisco.

W. C. JORDAN, formerly secretary to W. S. FARISH, president of Standard Oil Co. of New Jersey, has been transferred to Standard Oil Co. of New Jersey (Del.) at 26 Broadway, New York, where he will be assistant to R. L. MASON, manager of industrial relations.

EARL B. GILMORE, president of Gilmore Oil Co., Los Angeles, Calif., has been named president of the Hollywood Turf Club, operating the Inglewood race track. He succeeds WALTER G. McCARTY, who resigned to devote his entire attention to private business. Mr. Gilmore had been vice president of the club since its organization several years ago.

Do You Remember?

From The Oil and Gas Journal Files

25 YEARS AGO

Marcus C. McLaughlin, superintendent of the Corsicana Petroleum Co. at Electra, has been promoted to assistant to Gen. Supt. F. V. Faulkner at Dallas. Mr. McLaughlin served his apprenticeship with the South Penn Oil Co. in the Pennsylvania Grade fields.

A voluntary shutdown movement in the Cushing field is meeting with some success. The object is to stop overproduction and to save the market.

20 YEARS AGO

A 2-cent reduction in the tank-wagon price of gasoline in Chicago brings the price to the dealer to 21 cents per gallon. There is no tax.

A 2,000-bbl. well in Section 8-25-2e, Kay County, is the largest yet completed west of the Osage Nation in Oklahoma.

The world's deepest well near Fairmont, W. Va., has been abandoned at 7,579 ft. because the tools are hopelessly lost in the hole.

The Texas Railroad Commission issues an emergency order shutting down production and drilling in the Burkburnett field for 5 days in order to relieve the congestion.

10 YEARS AGO

The world's deepest oil well is in the Big Lake field in Reagan County, Texas, producing from Ordovician lime pay topped at 8,523 ft. Its peak daily production has been 2,712 bbl. of oil and 24,908,000 cu. ft. of gas. The oil varied in gravity from 52° up to 59.5° in the early stages of the well, and contained 55.7 per cent of gasoline.

Tank-wagon price of gasoline in Chicago is 16 cents per gallon. There is no tax.

MARSHALL A. JEFFERS, geologist for Carter Oil Co., Tulsa, has been assigned to Woodward, Okla.

WALLACE PRATT, New York, director of Standard Oil Co. of New Jersey, is spending several days in Houston, Tex., on a business and pleasure trip.

GEORGE C. GROW, JR., formerly junior geologist at Caripito for Standard Oil Co. of Venezuela, has joined the staff of Peoples Natural Gas Co., Pittsburgh, Pa.

DICK NELSON, head of the land department for the Stanolind Oil & Gas Co., Fort Worth, Tex., is on vacation with relatives in the Ozark Mountains of Missouri.

ROGER L. YOUNG, who graduated last month from the University of Kansas as a geological engineer, is now a junior geologist for the Kansas State Highway Commission, Topeka.

L. A. STEPHENS, formerly with the production division of Stanolind Oil & Gas Co., Fort Worth, Tex., has been transferred to Casper, Wyo. A. W. LUCAS, from the Casper, Wyo., office, will replace Mr. Stephens in Fort Worth.

GEORGE W. PRYOR, engineer at Rodessa, La., for the state Conservation Department, spent much of his vacation in Bethany, Mo., his birthplace. W. H. HAGER, engineer at Cotton Valley, La., for the state Conservation Department, left this week on his vacation. He will visit the New York World's Fair.

HOWARD WADDLE, recent graduate in petroleum engineering from University of Oklahoma, has joined the staff of the Arkansas Oil and Gas Commission, in El Dorado.

DANIELSON SCHONEGENL, former managing director of Asiatic Petroleum Co. subsidiary operations at Curacao, completed a visit in the United States and returned last Friday to the Dutch West Indies.

DOUG MONTELL, of Tide Water Associated Oil Co., with offices at the company headquarters in San Francisco, has been placed in charge of publicity work. In his new job he will be a frequent visitor in Los Angeles and other southern California points.

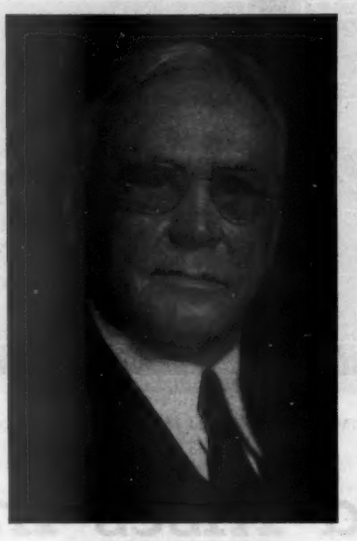
DR. BEN H. PARKER, instructor in the Colorado School of Mines department of geology, has been granted a year's leave of absence to make an investigation for the Argentine Government-controlled oil company Yacimientos Petroliferos Fiscales.

DR. M. L. THOMPSON, geologist and paleontologist for Phillips Petroleum Co. in Lafayette, La., has resigned to accept an assistant professorship of geology and paleontology at the New Mexico School of Mines in Socorro, N. M. His resignation is effective July 15.

W. P. LUSE, Dallas, Tex., oil man, has completed work on a new estate 3½ miles southeast of Carrollton. Extending over a 40-acre tract, the estate includes the main building, keeper's house, barns, hog houses, chicken houses, sheep houses, barbecue pit and a lake which, stocked with fish, almost surrounds the house. A creek winds over a part of the property. The rambling house is of ranch-house design.

When Minutes Counted

B. G. Dawes, now chairman of the board of the Pure Oil Co., was in the Waldorf-Astoria, New York, on a winter night in 1914, closing a contract which involved sale of the company's Cabin Creek properties in West Virginia, when he received a cryptic telegram, "Hold all negotiations until you hear from me. McIlvain." Nervously he stalled for time. He had reached the end of his resources as a strategist and was about to sign the contract when, at 3 in the morning, Robert W. McIlvain reached him by telephone from Charleston, W. Va., with news that a well drilled by the company at Cabin Creek had struck oil.



R. W. McILVAIN

Mr. McIlvain had walked over rough, hilly roads from the well to Cabin Creek Junction, filed a telegram there, and then ridden on a freight train to Charleston to telephone word of the discovery to his chief. It was the beginning of a big development which eventually changed the company from a utility operation to an oil company. The man whose promptness and determination saved rich leases had agreed to supervise the Cabin Creek operations for just a year, and the year was almost up. He changed his plans, cast his fortunes with the company, and today is vice president and director. He has been active in expansion projects. Gross revenue from the Cabin Creek field alone has aggregated more than $51,000,000. Mr. McIlvain's hobby is race horses, and his pacing mare Goldie Todd was a Grand Circuit winner.

ERNEST G. ROBINSON, of Shell Oil Co., Inc., with offices in St. Louis, is spending a vacation in California.

D. VAN NYMEGEN SCHONEGEVEL, former managing director of Asiatic Petroleum Co., Curacao, sailed from New York July 7 for Curacao.

S. F. SHAW, consulting engineer for Westgate-Greenland Oil Co., is in Long Beach, Calif., to examine properties owned by that company in the Wilmington field.

DONALD H. RIDDELL, well sampler for Mene Grande Oil Co., has left Maracaibo, Venezuela, for the United States, expecting to be in California indefinitely.

F. H. PIERSON is new deputy supervisor of the Texas Railroad Commission in the San Antonio office, replacing W. P. LAUGHTER, transferred to the Refugio office. Mr. Pierson has been with the commission 15 years, in the Dallas and East Texas offices.

HENRY ZWEIFEL, president of Cosden Petroleum Corp., Fort Worth, Tex., was reelected at the annual stockholders' meeting held in Fort Worth. MILTON C. ZAIDENBERG, New York, was renamed vice president, and JOHN W. LANE, Fort Worth, secretary-treasurer.

HARRY H. LAWSON is in charge of a new office opened in Evansville, Ind., by Adams Oil & Gas Co., of Houston, Tex. RUSSELL SPARENBERG, formerly with Skelly Oil Co., is district geologist, and WALTER WATSON is scout. The company will continue to maintain its office in Centralia, Ill., with C. J. HAAS, production superintendent, and WALTER JOHNSON, geologist. Mr. Lawson will supervise land department work in Illinois and Indiana.

JOE RANKIN, formerly western purchasing agent for Texas Co., with his office in Denver, Colo., has been made central purchasing agent, with his headquarters in the McCormick Building, Chicago. Mr. Rankin will have charge of purchases for the pipe line, production, refinery, and sales departments in Oklahoma, Kansas, Illinois, Kentucky, and the Rocky Mountain area.

SHIFTS: T. W. COLLINS, superintendent Sinclair Prairie Oil Co., from St. Louis, Okla., to Drumright, Okla.; JULIAN HAWES, geologist California Co., from Stilwell, Okla., to Houston, Tex.; J. T. REEVES, superintendent Sinclair Prairie Oil Co., from Wink, Tex., to Midland, Tex.; BYRON MEREDITH, superintendent Sinclair Prairie Oil Co., from Troup, Tex., to Houston, Tex.; J. H. Girdler, geologist Phillips Petroleum Co., from Richmond, Va., to Girdler & Wheeler Exploration Co., Houston, Tex.; R. A. WRIGHT, superintendent Sinclair Prairie Oil Co., from Odessa, Tex., to Wink, Tex.; F. C. HALL, purchasing agent the Henderson Co., from San Antonio, Tex., to Robstown, Tex.; W. B. McCARTER, geologist Tide Water Associated Oil Co., from Lafayette, La., to Houston, Tex.; BURR LAMBERT, drilling contractor, from Centralia, Ill., to Evansville, Ind.; C. G. NEWTON, Newton-Simmon Oil Co., from Scituate, Mass., to Boston, Mass.; H. L. GRILEY, geologist Sun Oil Co., from Tulsa to Guthrie, Okla.; W. P. JENNY, consulting geologist, from Houston, Tex., to Berne, Switzerland; J. F. SEARIGHT, president Donmar Oil Co., from Salem, Ill., to St. Louis, Mo.

W. M. WOFFORD, of the G. W. Drilling Co., Dallas, Tex., and CARL C. MAYS, also of Dallas, and interested in the G. W. Drilling Co., have organized the Wofford Drilling Co., with headquarters in Dallas.

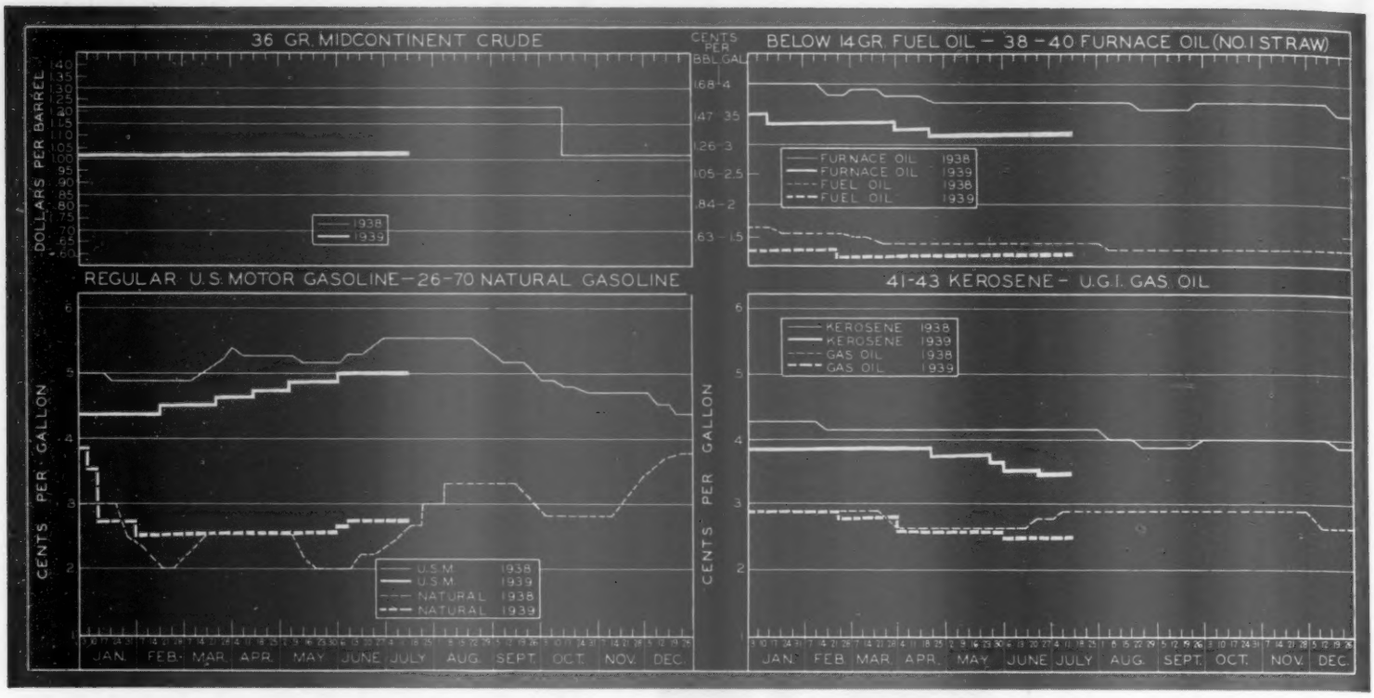
H. R. McKINNEY, pioneer oil producer in the Bradford field, and Mrs. McKinney were honored at a family dinner in their home in Detroit, Mich., July 4 in celebration of their sixtieth wedding anniversary. JOHN W. VAN TINE, of Bradford, Pa., named grand old man of the oil industry, and Mrs. Van Tine were among the guests, as were four children and two grandchildren of Mr. and Mrs. McKinney. Mr. and Mrs. McKinney plan to be in Bradford September 30 to help celebrate the sixtieth wedding anniversary of the Van Tines.

JAMES FITZGERALD, JR., manager of the land and lease department of Skelly Oil Co., Midland, Tex., has been commissioned a colonel on the staff of Governor Miles of New Mexico.

GEORGE P. HENRY, formerly with the Shamrock Oil & Gas Corp. in Amarillo, Tex., has resigned his position and will be associated with JOHN SHEERIN, Corpus, Christi, Tex., in the natural-gasoline business. Mr. Sheerin was the organizer and, for several years, president of Shamrock.

C. V. LEE, president of Lee Petroleum Corp., San Angelo, Tex., has returned from a two weeks' trip to New York and eastern states. Mr. Lee saw the Louis-Galento championship bout. He was accompanied on his trip by Mrs. Lee and members of their family.

DON MARTIN, deputy supervisor of the oil and gas division of the Railroad Commission of Texas, with headquarters in San Angelo, accompanied by Mrs. Martin, is taking a two weeks' motor trip through western states and California. T. H. WILLIAMS is in charge of the commission office during his absence.



Representative Mid-Continent Quotations on Crude Oil and Refined Products, Basis Oklahoma (Group 3)

Gasoline Demand Rises in Group 3 Territory, but Uneasiness Persists

By T. F. SMILEY

The volume of gasoline business rose so sharply in the Group 3 area as the current week opened that refiners shook off some of the uneasiness that beset them. Both spot orders and shipments on contract took a vigorous upturn. But the common attitude was expressed by one man who asked, "What good are big sales if you don't make any money on them?"

Prices None Too Firm

And prevailing tankcar prices were none too firmly anchored. As a matter of fact they wabbled disconcertingly. Some refiners were offering marked concessions in order to move material at once, apparently impelled either by need of cash or by fear of a cut in the price of crude that might be the signal for a general markdown in quotations on products.

The tone of the gasoline market was not helped by a downward revision of tank-wagon prices late last week in Texas, the new quotations being 1 cent lower than those previously in effect. Continental Oil Co. led in the reduction, which was said to have been impelled by failure of one important company to join in the recent 1-cent advance.

Even the action of Socony-Vacuum Oil Co., Inc., in withdrawing the modest tank-wagon advances which it made in New York and New England last month, when Sinclair Refining Co. announced a general tank-wagon rise of a half-cent, tempered the gratification of Oklahoma refiners over the stream of orders coming in.

Gasoline was definitely tight in Oklahoma last March and April, and it was expected the opening of the vacation season would see it still tighter. But unrestricted runs to stills threaten to rob the tankcar market of midsummer strength. Decline in the country's stocks has not maintained the rate that was imperative to bring them to an economic level. Gasoline consumption is estimated to be running about 4.2 per cent higher than it was a year ago, but the increase in runs to stills is much greater. In the week ending July 1 refinery operations were 11.2 higher than they were in the corresponding week of 1938.

Refined Oil Market Barometer

Excessive runs to stills, resulting in failure to bring gasoline stocks to an economic level, are preventing refinery prices from responding to heavy consumer demand. Fear of cuts in price of crude is contributing to market instability. Wax, though still in good position, is less active. Tractor fuels, kerosene, and most of the light distillates are soft. Natural gasoline holding.

MID-CONTINENT. Gasoline demand sharply up. Naturals steady. Kerosene, light fuels dull.

EAST COAST. Gasoline demand active, prices unsteady. Substantial buying of light fuels.

GULF COAST. Gas oils tight. Gasoline firm. General market fairly active.

CALIFORNIA. Slightly better tone in general market. Gasoline demand rising.

PENNSYLVANIA. Demand for neutrals and bright stocks continues brisk. Gasoline active.

CHICAGO. Gasoline slightly irregular. Heating oils inactive. Heavy fuels holding.

It has been recognized that the rate of decline in gasoline stocks would have to be faster than it was in 1938 if they were to be brought into line with actual needs. But since early April the course of refinery operations has been irregularly upward. Gasoline demand has been excellent, but production has been close behind it, with the result that in the week ending July 1 gasoline stocks, for the first time since the beginning of the year, were larger than they were in the corresponding week of 1938.

Observers of the Group 3 market point to this situation as one demanding immediate curtailment of crude runs to stills if the profitable summer business which was in prospects a short time ago is to be realized.

Naturals Doing Well

Export orders and inquiries continued to impart a firm tone to the natural gasolines. Oversea demand is for both full and part cargoes. According to manufacturers there is nothing to indicate that this business bears any relation to war possibilities in Europe.

Heavy rains in midwestern territory, especially in eastern Iowa and western Kansas, interfered seriously with farming operations, with consequent falling off in demand for tractor fuel, low-octane gasoline, kerosene and light distillates.

Wax, which had been a symbol of market strength, was beginning to soften a little. Sales of 124-126 white crude scale at 2.85 cents were reported, as against the 3 cents which for weeks was the take-it-or-leave-it quotation. Kerosene was extremely soft, with concessions easy to get.

Tankcar Shaded in Northeast Reflecting Gulf Situation

By H. STANLEY NORMAN

NEW YORK, July 10. — A reduction of two-tenths of a cent per gallon on the tankcar motor fuel prices in the New York and New England territory, excepting western New York State, was posted July 6 by Socony-Vacuum Oil Co., Inc.

There was no change in the dealer tank-wagon prices at Boston, New York, Providence, Syracuse and several other points in the territory which previously had been depressed. The company announced the tankcar price reduction was in response to a reduction of about an eighth of a cent per gallon on the Gulf Coast cargo market and a general depression of tanker charter rates applying to coastwise shipments.

With only 2 months of the peak motoring season remaining some of the Gulf Coast refiners are growing anxious to liquidate their gasoline stocks at a more rapid rate. Consumption has been exceptionally heavy during the past 2 or 3 weeks but the runs to stills have been moving forward at a comparable rate of increase.

The industry entered July with 80,102,000 bbl. of motor fuel on hand. Stocks of motor fuel have been liquidated only to the extent of 6,189,000 bbl. since the peak of 87,291,000 bbl. for 1939 was established in the week ended March 18. Between March 18, 1938, and July 1 gasoline stocks were whittled from 92,303,000 to 80,408,000 bbl., a reduction of 11,895,000 bbl., or nearly twice the rate of liquidation registered this year. There were only 3,000,000 bbl. of motor fuel withdrawn from stocks during June this year, compared to a decline of 6,000,000 bbl. for the same month in 1938. In an effort to move abundant motor fuel stocks on hand at several Gulf Coast refineries offerings were made last week an eighth of a cent below the last of June range of prices. Depression of the cargo motor fuel market in the face of record-breaking domestic consumption is considered in the East as a direct result of a consistently higher rate of refinery operation which was increased to 85.6 per cent of the capacity of reporting plants during the last week in June.

The spot market for motor fuel in tankcars has remained at a range of 6 to 6¼ cents per gallon for 65-octane material on the East Coast, but with the fading of quotations on the Gulf last week there appeared an increase in the offerings at the low of the spread. Seventy-octane motor fuel was available in several directions on the Gulf at 5⅛ cents per gallon, according to reports in New York, although plants in a better stock position were unchanged at 5¼ cents for this class of material.

The export market for motor fuel has been only moderately active during recent weeks. Several plants ordinarily called upon to meet greater foreign demand are being compelled to force their material on the domestic market, and this has involved shading of quotations in many instances. Foreign inquiry for gas oil is reported to have improved among Gulf Coast plants during the past 2 weeks. A cargo was reported sold on the Gulf last week at 3¼ cents per gallon. Gas oil with low Diesel-index rating is available at 3⅛ cents in a few directions.

There has been practically no change in the light fuel oil situation. Barge delivery of No. 2 fuel oil for 3⅝ cents per gallon can be obtained in the New York Harbor district and even this price may be shaded slightly on firm bid. Domestic purchasers of light fuel oil are taking a more active interest in the current market than during the earlier part of the summer and sufficient business is expected to develop from now until winter to at least hold current quotations. Buyers dependent on inland waterways subject to freezing in the winter are currently purchasing for August and September delivery.

The residual fuel oil market remains firm but there appears to be a slight easing of the supply tension. A report reached New York last week that one cargo of heavy fuel oil was sold on the Gulf Coast last week at 78 cents per barrel. Most suppliers reported, however, that they were firm at 80 cents per barrel for coastwise shipment. New York Harbor refineries and terminals continued offerings of Bunker C fuel oil at $1.05 per barrel to the marine trade. Shore plant delivery of No. 6 fuel oil was obtainable at $1.15 per barrel, but most suppliers were asking 2.85 to 3 cents per gallon for tank-wagon delivery. Despite the occasional reports of price shading in the retail tank-wagon market heavy fuel oil remains one of the strongest products in the entire list. Despite the high rate of refinery operations only moderate gains have been registered in heavy fuel oil inventories east of the Rocky Mountains. Demand has been holding at increased levels from steamship operators and from heavy industry in general. The demand may be expected to taper off slightly from now on until September or October because of reduced production schedules in automobile factories and related industries.

Western Pennsylvania refiners report the demand for neutral and bright stock lubricating oils is continuing at a brisk rate and prices are unchanged at the preceding week's levels. Shipping instructions are particularly brisk from contract customers whose demand in many instances is running considerably ahead of expectations.

Demand for wax continues at the increased rate prevailing so far this year and prices are approximately unchanged. White scale wax can be obtained in some directions for as low as 2.85 cents per pound, but a majority of sellers are currently asking 2.9 to 3 cents. Yellow scale of 124-126 a.m.p. can be obtained in certain directions for 2.8 cents. The low of the market range on all scale waxes is slightly off compared to three weeks ago. There has been a slight modification in export demand and stocks are not as difficult to locate as they were during the first three months of the year.

Retail motor fuel prices are mostly unchanged in the northeastern area although local disturbances continue to plague this branch of the industry. The retail market continues unsettled in Brooklyn where Socony-Vacuum abandoned resale contracts with dealers two weeks ago. Widespread sale of third-grade motor fuel in Kings County is one of the factors disturbing the Brooklyn market. Another area of depressed prices centers around Buffalo where regular grade branded gasoline is offered by practically all stations at $1.29 for 10 gal., including taxes.

The reduction in tankcar motor fuel prices last week by Socony-Vacuum did not affect the more important tank-wagon markets and the middle of June advances averaging from 2/10 to 3/10 cent per gallon prevail in most of the large consuming areas.

Unless refinery operations are drastically curtailed the consensus among eastern oil company executives is that motor fuel prices will experience difficulty in rising above present levels for the remainder of the summer.

A. P. I. Weekly Refinery Statistics

Week Ending July 8, 1939

	Capacity reporting (per cent)	Daily crude runs (bbl.)	Total gasoline stocks	Gas oil and fuel oil stocks
East Coast	100.0	516,000	21,413,000	9,430,000
Appalachian	85.9	102,000	3,281,000	629,000
Indiana, Illinois, and Kentucky	89.5	505,000	13,223,000	5,835,000
Oklahoma, Kansas, and Missouri	81.6	256,000	7,074,000	4,353,000
Inland Texas	50.3	118,000	1,537,000	2,142,000
Texas Gulf	89.5	846,000	9,246,000	10,053,000
Louisiana Gulf	97.3	140,000	2,633,000	2,594,000
North Louisiana and Arkansas	55.0	29,000	496,000	849,000
Rocky Mountains	54.2	38,000	1,516,000	709,000
California	90.0	523,000	15,224,000	95,513,000
Total reported	.....	3,073,000	75,643,000	132,107,000
Estimated unreported	.....	347,000	5,180,000	3,060,000
*Estimated total	.....	3,420,000	80,823,000	135,167,000
*Estimated total previous week	.....	3,480,000	81,102,000	136,853,000
*July 9, 1938	.....	3,221,000	79,550,000	139,315,000

*Bureau of Mines, currently estimated.

Stocks of Crude Oil in the United States

(BUREAU OF MINES ESTIMATE)

Week ending July 1, 1939	271,567,000 barrels
Week ending June 24, 1939	272,297,000 barrels
Week ending July 2, 1938	291,666,000 barrels

Figures do not include stocks of heavy, unrefinable California crude.

Retail Oil Markets

Tank-wagon and filling station prices on gasoline and kerosene furnished by the larger marketing firms

Prices as of July 11, 1939

Taxes

The gasoline quotations given in the following tables include the 1-cent federal tax, as well as state, county, and city taxes. The gasoline is the regular or standard grade. In most areas lower grades and a premium grade also are available.

Standard Oil Co. (Indiana)

	Gasoline			Kero.
	Tank-wag.	Dir.	Inc. tax	tank-wag.
Chicago, Ill.	15.1	13.1	4.0	10.0
Decatur	15.1	13.6	4.0	10.0
Joliet	15.1	13.6	4.0	10.0
Peoria	15.1	13.6	4.0	10.0
Quincy	14.9	13.4	4.0	9.8
Davenport, Ia.	15.1	13.8	4.0	‡10.0
Des Moines	14.9	13.4	4.0	‡9.8
Mason City	15.3	13.8	4.0	‡10.2
Duluth, Minn.	16.9	15.4	5.0	10.8
Mankato	16.5	15.0	5.0	9.4
Minneapolis	16.5	15.0	5.0	10.4
LaCrosse, Wis.	16.5	15.0	5.0	10.4
Green Bay	16.9	15.4	5.0	10.8
Milwaukee	16.3	14.8	5.0	10.2
Detroit, Mich.	13.6	12.1	4.0	7.1
Grand Rapids	14.0	12.5	4.0	9.7
Saginaw	15.8	13.6	4.0	9.3
Evansville, Ind.	16.6	15.1	5.0	†10.5
Indianapolis	16.8	15.3	5.0	†10.7
South Bend	17.1	15.6	5.0	†10.0
Fargo, N. D.	17.7	16.2	5.0	11.6
Huron, S. D.	17.0	15.5	5.0	10.9
Kans. City, Mo.*	14.4	12.9	4.0	8.0
St. Louis*	14.7	13.2	4.0	8.0
St. Joseph	14.4	8.9	4.0	7.9
Wichita, Kans.	13.9	10.6	4.0	7.4

*State tax 2 cents, 1-cent city tax and 1-cent federal tax. †Does not include 4-cent state tax. ‡Does not include 3-cent state tax.

Exclusive of state general sales taxes.

Discounts to commercial consumers: On purchases per month off tank-wagon prices: 1,000 gallons or more, 1.5 cents off; minimum delivery 25 gallons.

Stanolex Fuel Oil in Chicago

Effective June 1, 1939, f.o.b. Chicago tank-wagon prices: Standard range oil, 1-99 gallons, 9 cents; 100-149 gallons, 8 cents; 150 gallons and over, 7.5 cents. Stanolex fuel oil No. 1, 1-149 gallons, 8.25 cents; 150-399 gallons, 7.25 cents; 400 gallons and over, 6.75 cents. Stanolex furnace oil, 1-149 gallons, 8.25 cents; 150-399 gallons, 7.25 cents; 400 gallons and over, 6.75 cents. Stanolex Grade A, 1-399 gallons, 5 cents; 400 gallons and over, 4 cents. Stanolex Grade B, 1-799 gallons, 5 cents; 800 gallons and over, 4 cents. Stanolex Grade C, 1-999 gallons, 4.25 cents; 1,000 gallons and over, 3.25 cents.

Ohio

STANDARD OIL CO. OF OHIO

	Gasoline			Kero.
	Tank-wag. con'r.	Divided dir.	Inc. tax	tank-wag.
Ohio points	16.0	15.0	5.0	*13.0

*Includes state tax of 1 cent.

Atlantic Coast District

STANDARD OIL CO. OF NEW JERSEY

	Gasoline			Kero.
	Cons. tank-car	Dir. tank-wag.	Inc. tax	tank-wag.
Atl'tic City, N. J.	10.9	12.7	4.0	7.0
Newark	10.9	12.7	4.0	7.0
Annapolis, Md.	12.85	14.35	5.0	9.5
Baltimore	12.25	13.75	5.0	7.0
Cumberland	13.65	16.15	5.0	10.0
Wash'gton, D. C.	10.50	12.0	3.0	9.5
Danville, Va.	14.45	16.95	6.0	12.9
Norfolk	13.25	15.75	6.0	11.5
Petersburg	13.55	16.05	6.0	11.7
Richmond	13.55	16.05	6.0	10.7
Roanoke	14.75	17.25	6.0	11.0
Charles'n, W. Va.	14.05	16.55	6.0	12.6
Parkersburg	13.35	14.85	6.0	11.2
Wheeling	14.35	15.75	6.0	12.2
Charlotte, N. C.	15.40	17.90	7.0	11.8
Hickory	15.95	18.45	7.0	12.3
Mt. Airy	15.80	18.50	7.0	12.2
Raleigh	15.15	17.65	7.0	11.5
Salisbury	15.45	17.95	7.0	11.9
Charleston, S. C.	14.25	16.75	7.0	10.6
Columbia	15.25	17.75	7.0	11.6
Spartanburg	15.95	18.45	7.0	12.4

Price basis to Esolene undivided dealers: Dealer tank-wagon price less .5 cent per gallon. Price basis to commercial consumers, effective March 8, 1937, in Maryland, District of Columbia, and in Arlington and Fairfax counties in Virginia; and March 12 in New Jersey: To contract accounts purchasing at least one full company department at time by hose connection, on yearly purchases: From 2,500 to 100,000 gallons, consumer tank-wagon price at time and place of delivery; 100,000 gallons per year, consumer tankcar price plus .5 cent per gallon. Consumer tank-wagon price generally will be equivalent to dealer tank-wagon price less .5 cent per gallon.

Effective January 16, 1939, in North Carolina the commercial consumer schedule became as follows: Single deliveries of 50 gallons or more, consumer tank-wagon price. Single deliveries of less than 50 gallons, 4 cents per gallon over consumer tank-wagon price. Generally the posted consumer tank-wagon price will be equivalent to the dealer price, less .5 cent per gallon. The above policy also applies in South Carolina effective January 23, 1939.

Discounts for kerosene, 1 cent off tank-wagon price for 25 gallons or more under contract (contract not necessary in Baltimore) except no discount in New Jersey.

Southern District

STANDARD OIL CO. (KENTUCKY)

	Gasoline			Kero.
	Cons'r. tank-wag.	Net dir.	Inc. tax	tank-wag.
Atlanta, Ga.	21.0	18.0	7.0	9.0
Augusta	20.0	17.0	7.0	9.0
Macon	19.0	16.0	7.0	10.0
Savannah	19.0	16.0	7.0	8.0
Birmingham, Ala.	21.0	18.0	8.0	8.5
Mobile	18.5	15.5	9.0	8.5
Montgomery	22.0	19.0	9.0	10.5
Jackson, Miss.	19.0	16.0	7.0	9.5
Vicksburg	19.0	16.0	7.0	9.0
Jacksonville, Fla.	20.0	17.0	8.0	8.0
Miami	20.0	17.0	8.0	8.0
Pensacola	21.0	18.0	9.0	8.0
Tampa	20.0	17.0	8.0	8.0
Lexington, Ky.	19.5	16.5	6.0	10.0
Covington	17.5	14.5	6.0	9.5
Louisville	18.5	15.5	6.0	9.0
Paducah	18.5	15.5	6.0	9.0

Price basis to tank-wagon consumers: Effective January 4, 1937; 3 cents per gallon below tank-wagon price.

Montgomery, Ala., has a county tax of 1 cent per gallon, and a city tax of 1 cent per gallon on gasoline, in addition to state tax and 1 cent per gallon on kerosene. Mobile, Ala., has a city gasoline tax of 2 cents per gallon; Birmingham, Ala., has a city gasoline tax of 1 cent per gallon; Pensacola, Fla., has a city gasoline tax of 1 cent. All are included in the table.

Pennsylvania and Delaware

ATLANTIC REFINING CO.

	Gasoline			Kero.
	Cons. tank-car	Dir. tank-wag.	Inc. tax	tank-wag.
Philadelphia, Pa.	12.0	13.5	5.0	10.0
Pittsburgh	13.0	14.5	5.0	10.5
Allentown	12.5	14.0	5.0	10.5
Erie	13.0	14.5	5.0	10.0
Scranton	12.5	14.0	5.0	10.5
Altoona	13.0	14.0	5.0	10.5
Dover, Del.	...	14.0	5.0	10.5
Wilmington	...	13.5	5.0	9.75

Price basis to undivided dealers, dealer tank-wagon price less .5 cent per gallon.

New York and New England

SOCONY-VACUUM OIL CO., INC.

	Gasoline			Kero.
	Cons. tank-car	Dir. tank-wag.	Inc. tax	tank-wag.
Albany	11.5	13.8	5.0	7.00
*Met. N. Y.:				
Manhat., Bronx	11.6	13.0	5.0	6.75
Queens, Br'klyn	11.6	13.0	5.0	6.75
Staten Island	11.6	13.0	5.0	6.75
Buffalo	12.4	11.8	5.0	7.50
Rochester	12.6	14.0	5.0	7.75
Syracuse	12.2	13.5	5.0	7.25
Boston	10.5	12.25	4.0	6.50
Portland, Me.	11.5	12.8	5.0	6.75
Manchester, N. H.	12.2	14.2	5.0	7.25
Burlington, Vt.	12.0	13.0	5.0	7.25
Springfield, Mass.	11.2	12.5	4.0	6.00
Worcester	11.0	12.5	4.0	7.00
Hartford, Conn.	10.9	13.0	4.0	6.50
New Haven	10.8	12.25	4.0	6.00
Providence, R. I.	10.5	12.3	4.0	6.50

*Does not include 2 per cent city sales tax which is calculated on basis of net retail price exclusive of state and federal taxes. Metropolitan New York prices are undivided dealer prices; others are split dealer.

Effective February 15, 1939, the company changed its commercial consumer policy in New York and New England points for tank-wagon delivery to the following: Annual purchases 10,000 gallons and under, tankcar price plus 2 cents per gallon; annual purchases 10,000 gallons up to 50,000 gallons, tankcar price plus 1.5 cents per gallon; annual purchases 50,000 to 200,000 gallons, tankcar price plus 1 cent per gallon; annual purchases 200,000 gallons and over, tankcar price plus one-half cent per gallon. Private consumers pay undivided dealer price, plus 2 cents per gallon. Private consumers receiving full compartment deliveries of at least 200 gallons receive a discount of one-half cent per gallon.

Pacific Coast Territory

STANDARD OIL CO. OF CALIFORNIA

	Gasoline			Kero.
	Tank-truck	Serv. sta.	Inc. tax	tank-wag.
San Francisco	17.5	18.5	4.0	11.5
Los Angeles	17.0	18.0	4.0	10.0
Fresno, Calif.	18.5	19.5	4.0	12.5
Phoenix, Ariz.	21.5	22.5	6.0	*17.5
Reno, Nev.	20.5	21.5	5.0	13.5
Portland, Ore.	20.0	21.0	6.0	13.5
Seattle, Wash.	20.0	21.0	6.0	†13.75
Spokane	21.5	22.5	6.0	†16.75
Tacoma	20.0	21.0	6.0	†13.75

*Includes 5-cent state tax. †Includes .25-cent state tax.

Discounts to dealers: On gasoline, off tank-wagon price, to 100 per cent dealers, 3 cents. To commercial consumers: On tank-wagon price; on single deliveries of 40 gallons and over, advance quantity discount extended at time of delivery, 3 cents. Service station schedule applies on single deliveries less than 40 gallons. On kerosene in tankcar, transport truck and trailer delivery, 3 cents off tank-wagon price; plant deliveries to jobbers, 2.5 cents below tank-wagon.

March 18, 1939, split dealer discount was canceled.

Rocky Mountain District

CONTINENTAL OIL CO.

	Gasoline			Kero.
	Tank-wag.	Dir.	Incl. tax	tank-wag.
Denver, Colo.	15.5	...	5.0	11.5
Grand Junction	18.0	...	5.0	15.0
Pueblo	16.0	...	5.0	9.0
Casper, Wyo.	17.0	...	5.0	11.5
Cheyenne	15.0	...	5.0	13.0
Billings, Mont.	18.0	...	6.0	13.0
Butte	19.5	...	6.0	15.5
Great Falls	19.0	...	6.0	15.5
Helena	20.0	...	6.0	15.5
Salt Lake, Utah	17.0	17.0	5.0	16.0
Boise, Idaho	20.1	20.1	6.0	18.0
Twin Falls	20.6	20.6	6.0	18.0
Albu'que, N. M.	17.0	17.0	6.5	10.0
Roswell	15.5	15.5	6.5	8.0
Santa Fe	17.5	17.5	6.5	10.0

*Includes city tax of .5 cent. †Includes state tax of 1 mill.

Tank-wagon represents price to consumers. Dealer represents price to dealers. If no dealer price is quoted, the tank-wagon price applies to all classes of trade.

Central South District

STANDARD OIL CO. OF LOUISIANA

	Gasoline			Kero.
	Cons. tankcar	Dir. tank-wag.	Inc. tax	tank-wag.
New Orleans, La.	16.75	19.25	*10.0	†11.0
Baton Rouge	14.75	17.25	8.0	‡10.5
Alexandria	14.75	17.25	8.0	‡12.5
Lafayette	15.00	17.50	8.0	‡11.0
Lake Charles	14.75	17.25	8.0	‡12.5
Shreveport	13.50	16.00	8.0	‡11.0
Knoxville, Tenn.	18.00	20.50	8.0	14.5
Memphis	16.00	18.50	8.0	11.0
Chattanooga	17.50	19.00	8.0	14.0
Nashville	17.00	19.50	8.0	12.0
Bristol	18.25	17.00	8.0	13.0

Essolene at dealer price less .5 cent per gallon to undivided dealers.

*Includes 2-cent parish tax. †Includes 1-cent parish tax and 1-cent state tax. ‡Includes 1-cent state tax.

Price basis to commercial consumers: Effective May 15, 1937, deliveries of 50 gallons or more in one territory take posted consumer tank-wagon price. Accounts taking deliveries of less than 50 gallons at one time pay posted consumer tank-wagon price plus 4 cents per gallon. Generally, the posted consumer tank-wagon price will be equivalent to the dealer price less .5 cent per gallon. Kerosene prices include 1-cent state tax.

Effective February 24, 1939, the company reestablished in New Orleans the commercial consumer policy on motor fuel effective in the rest of the state.

Effective December 12, 1938, the company revised its commercial consumer policy on motor fuel in New Orleans, as follows: Single deliveries of less than 50 gallons, consumer tankcar plus 2 cents per gallon; 50 to 199 gallons, consumer tankcar plus 1 cent per gallon; 200 gallons and over, consumer tankcar plus .5 cent per gallon.

Nebraska

STANDARD OIL CO. (NEBRASKA)

	Gasoline			Kero.
	Tank-Wag.	Dir.	Inc. tax	tank-wag.
Omaha	17.5	16.0	6.0	10.3
McCook	16.5	13.5	6.0	9.0
Norfolk	17.0	15.9	6.0	9.0
North Platte	18.3	16.8	6.0	11.1
Scottsbluff	18.0	15.9	6.0	11.0

Discounts to commercial consumers for tank-wagon deliveries covered only by standard commercial consumers contract, effective January 1, 1935.

Oklahoma and Arkansas

CONTINENTAL OIL CO.

	Gasoline		Kero.
	Tank-wag.	Includes tax	tank-wag.
Texarkana, Ark.	14.0	5.0	8.0
Fort Smith	14.0	5.0	7.5
Little Rock	16.75	7.5	8.0
Muskogee, Okla.	13.0	5.0	7.0
Oklahoma City	13.0	5.0	6.5
Tulsa	13.0	5.0	7.0

The tank-wagon price is the price to all classes of trade.

Texas

	Gasoline			Kero.
	Tank-wag.	Serv. sta.	Inc. tax	tank-wag.
Dallas, Tex.	14.0	18.0	5.0	7.0
Fort Worth	14.0	18.0	5.0	8.0
Houston	14.0	18.0	5.0	8.0
San Antonio	14.0	18.0	5.0	8.0

Naphtha

STANDARD OIL CO. (INDIANA)

	Tank-wagon*
Oleum spirits	15.7
V.M.&P. naphtha	16.0
Cleaners' naphtha	15.0
Stanisol	15.0

*Prices include 3-cent Illinois tax but not 1-cent federal tax or 2 per cent retail occupational tax.

Prices f.o.b. Chicago. Each price subject to discount of 1 cent per gallon for 150-gallon lots if covered by contract.

Canada

3-Star Imperial Gasoline
IMPERIAL OIL, LTD.

	Tank-wag.	Inc. tax	Kero. tank-wag.
Halifax, N. S.	23.5	10.0	17.5
St. John, N. B.	23.5	10.0	17.5
Montreal, Que.	22.0	8.0	14.5
Toronto, Ont.	23.0	8.0	15.5
Hamilton, Ont.	23.0	8.0	15.5
Winnipeg, Man.	26.5	7.0	20.5
Brandon, Man.	28.0	7.0	22.9
Regina, Sask.	26.0	7.0	22.0
Saskatoon, Sask.	28.3	7.0	24.9
Edmonton, Alta.	26.5	7.0	21.5
Calgary, Alta.	23.5	7.0	19.0
Vancouver, B. C.	23.0	7.0	23.0

Tank-Wagon Changes

Standard Oil Co. (Kentucky) June 20 advanced consumer tank-wagon and net dealer gasoline .5 cent in Atlanta, Augusta, Macon, Savannah, Birmingham, Montgomery, Jackson, Vicksburg, Jacksonville, Miami, Pensacola, Tampa, Lexington, Louisville, Paducah. June 14, reduced consumer tank-wagon and net dealer gasoline 2.5 cents in Mobile; June 20, advanced consumer tank-wagon and net dealer gasoline .5 cent in Mobile.

Standard Oil Co. (Nebraska) June 29 reduced dealer gasoline 1.5 cent in McCook; July 3, reduced tank-wagon gasoline .5 cent in McCook.

Socony-Vacuum Oil Co., Inc., July 6 reduced consumer tankcar gasoline .2 cent in Albany, metropolitan New York, Boston, Manchester, Portland, Burlington, Springfield, Hartford, New Haven, and Providence; .1 cent in Syracuse; .4 cent in Worcester. On the same date reduced dealer tank-wagon gasoline .2 cent in Albany, Hartford, and Providence; .9 cent in Portland; .3 cent in Manchester; 1.5 cents in Burlington; .8 cent in Springfield.

Standard Oil Co. (Indiana) June 27 reduced dealer gasoline 1 cent in Wichita; July 1, advanced dealer and tank-wagon gasoline 1 cent in Fargo because of an increase in state tax; July 3, reduced dealer and tank-wagon gasoline .5 cent in Grand Rapids.

Prices of Refined Products

All quotations f.o.b. plant in cars for interstate or export movement except as otherwise noted

Prices as of July 11, 1939

The following quotations are exclusive of the federal excise taxes of 1 cent a gallon on gasoline and 4 cents a gallon on lubricating oils.

Refinery Gasoline

OKLAHOMA (Group 3)—

U. S. Motor grades:		
62 octane and below	.04¼	.04⅜
63-66 octane	.04½	.04⅝
67-69 octane	.04¾	.04⅞
70-72 octane (regular)	.05	.05⅛
60-62 400 grades:		
62 octane and below	.04¼	.04⅜
63-66 octane	.04½	.04⅝
67-69 octane	.04¾	.04⅞
70-72 octane (regular)	.05	.05⅛
64-66 375	.04¼	.04⅜
68-70 360	.05	.05⅛

NORTH TEXAS—

U. S. Motor grades:		
62 octane and below	.04¼	.04⅜
63-66 octane	.04½	.04⅝
67-69 octane	.04¾	.04⅞
70-72 octane (regular)	.05	.05⅛
60-62 400	.04¼	.04⅜
64-66 375	.04¼	.04⅜

NORTH LOUISIANA (Ark. and N. La. delivery)—

U. S. Motor grades:		
62 octane and below	.04¼	.04⅜
63-66 octane	.04½	.04⅝
67-69 octane	.04¾	.04⅞
70-72 octane (regular)	.05	.05⅛

ARKANSAS (Ark. and N. La. del.)—

U. S. Motor grades:		
62 octane and below	.04½	.04⅝
67-69 octane	.04⅞	.05

CHICAGO (Based on Group 3)—

U. S. Motor grades:		
62 octane and below	.04¼	.04⅜
63-66 octane	.04½	.04⅝
67-69 octane	.04¾	.04⅞
70-72 octane (regular)	.05	.05⅛
60-62 400 grades:		
62 octane and below	.04¼	.04⅜
63-66 octane	.04½	.04⅝
67-69 octane	.04¾	.04⅞
70-72 octane (regular)	.05	.05⅛
64-66 375	.04¼	.04¼
68-70 360	.05	.05¼

PENNSYLVANIA (inland refineries)—

58-60 U. S. Motor:		
Below 60 octane	.04½	.05
65 octane	.06¼	.06¾
68-70 octane		.06½

CALIFORNIA (domestic movement)—

54-58 U. S. Motor	.06½	.08
58-60 400, 65 oct. and higher	.07½	.09

EAST COAST (domestic)—

U. S. Motor, 65 and above:		
*New York (Bayonne)	.06	.06¼
Philadelphia	.06	.06¼
Baltimore	.06	.06¼
Charleston, S. C.	.06½	.06¾

*All grades of gasoline ⅛ to ¼ cent less for barge shipments. New York Harbor prices are for New York and New England delivery. Prices for New Jersey delivery ¼ cent lower.

GULF COAST (domestic)—

U. S. Motor grades:		
Below 60 octane	.04¼	.04⅜
60-64.9		.04½
65 octane and higher	.05½	.05¼
68-70	05⅛	.05½

Naphtha

PENNSYLVANIA (inland refineries)—

52-56 450 (blending)	.04¼	.04⅛

Natural Gasoline

OKLAHOMA (Group 3)—

Grade 26-70	.02⅜
Grade 18-55	.03¼

NORTH TEXAS—

Grade 26-70	.02⅜
Grade 18-55	.03¼

CALIFORNIA—

75-85 375-390	.06	.06¾

NORTH LOUISIANA (Ark. and N. La. delivery)—

Grade 26-70	.03¼

Tractor Fuel

OKLAHOMA (Group 3)—

40-42 gr., 315-325 l.b.p., 110-flash, 540-550 e.p.	.03⅜	.03⅝
41-43 gr., 300-320 l.b.p., 110-125 flash, 500-520 e.p.	.03½	.03¾
46-48 gr., 210-230 l.b.p., 480-max., e.p.	.03⅜	.04⅛

Kerosene

(All kerosene water white)

OKLAHOMA (Group 3)—

41-43	.03⅜	.03⅝
42-44	.03⅝	.03⅞

NORTH TEXAS—

41-43	.03⅜	.03⅝

NORTH LOUISIANA (Ark. and N. La. delivery)—

41-43	.03⅜	.04

ARKANSAS (Ark. and N. La. del.)—

41-43		.04¼

PENNSYLVANIA (inland refineries)—

45	.05	.05⅛
46	.05¼	.05½
47	.05¼	.05⅝

CHICAGO (Based on Group 3)—

41-43	.03¾	.03⅞
42-44	.03⅞	.04

CALIFORNIA (Pac. Coast market)—

38-43 high burning test	.04⅜	.05¾

NEW YORK (Bayonne, N. J.)—

41-43		.04¾

***GULF COAST (domestic)—**

41-43		.03½

*Barge price ⅛ cent lower.

Furnace Oil

OKLAHOMA (Group 3)—

Range oil	.03⅜	.03½
No. 1 prime white, 38-42	.03½	.03⅝
No. 1 straw, 38-40	.03½	.03¼
No. 2 straw, 32-36	.02¾	.03
No. 2 dark, 32-36	.02⅝	.02¾
No. 3 zero to 15, 28-32	.02½	.02⅝
No. 3, 15 and above, 28-32	.02⅜	.02½

NORTH TEXAS—

No. 1 prime white, 38-42	.03½	.03⅝
No. 1 straw, 38-40	.03⅛	.03¼

NORTH LOUISIANA (Ark. and N. La. delivery)—

No. 2, 32-36		.03

ARKANSAS (Ark. and N. La. del.)—

No. 2, 32-36		.03⅜

CHICAGO (Based on Group 3)—

Range oil	.03⅜	.03⅝
No. 1 prime white, 38-40	.03½	.03⅝
No. 1 straw, 38-40	.03⅜	.03½
No. 2 straw, 32-36	.03¼	.03⅜
No. 2 dark, 32-36	.03⅛	.03¼
No. 3, zero to 15, 28-32	.03	.03⅛
No. 3, 15 and above, 28-32	.02¾	.02⅞

NEW YORK (Bayonne, N. J.)—

*No. 1	.04	.04¼
*No. 2		.03¾
*No. 4		.03¾

*Barge deliveries ⅛ to ¼ cent under above tankcar price.

Gas Oil and Fuel Oil

(Gas oil per gal., fuel oil per bbl.)

OKLAHOMA (Group 3)—

U.G.I. gas oil	.02½	.02⅝
No. 4 low pourpoint, 24-28	.90	1.00
No. 4, 15 and above, 24-28	.80	.90
No. 5, low pourpoint, 18-22	.70	.75
Below 14 fuel oil, industrial	.45	.55

NORTH TEXAS—

U.G.I. gas oil	.02½	.02⅝
No. 4, low pourpoint, 24-28	.90	1.00
No. 5, low pourpoint, 18-22	.70	.75
Below 14 fuel oil, industrial	.45	.55

NORTH LOUISIANA (Ark. and N. La. delivery)—

10-14 fuel oil, industrial	.70	.75

CHICAGO (Based on Group 3)—

U.G.I. gas oil	.02⅝	.02¾
No. 4, low pourpoint, 24-28	1.00	1.05
No. 4, 15 and above, 24-28	.85	.90
No. 5, low pourpoint, 18-22	.70	.80
No. 5, 15 and above, 18-22	.60	.70
No. 6, low pourpoint, 10-16	.60	.70
No. 6, 15 and above, 10-16	.35	.45

PENNSYLVANIA (inland refineries)—

36-40	.04½	.04¾

CALIFORNIA—

Los Angeles:		
30-40 gas oil, per bbl.	1.10	1.30
24 plus Diesel, per bbl.	.80	1.15
24 plus Diesel (bunkers)	1.15	1.30
12-16 (bunkers at tidewater)	.70	.90
10-16 (cargo lots)	.60	.80
12-17 (tankcars)	.50	.90
10-17 (high sulfur)	.45	.85
San Joaquin Valley:		
10-18 (tankcars)	.50	.75
24 plus Diesel, per bbl.	.90	1.20
San Francisco:		
24 plus Diesel, per bbl.	1.30	1.45
24 plus Diesel (bunkers)	1.35	1.55
10-16 (bunkers)	.90	.95

GULF COAST—

No. 2 fuel	.03⅛	.03¼
43-47 Diesel		.03½
48-52 Diesel	.03¼	.03½
53-57 Diesel	.03⅜	.03½
Bunker C (bulk cargoes)	.77	.80
Bunker C (bunkers)	.80	.85

NEW YORK (Bayonne, N. J.)—

27 plus, gas oil		.03¾
28-30 Diesel (lighterage 6¼c per bbl.)		1.65
28-30 Diesel (tankcars)	.04	.04¼
Bunker C (to ocean-going ships in N. Y. Harbor)		1.05
Industrial fuel (tankcars)		.03¼

Lighterage charge 5c bbl. additional.

Bright and Steam Refined

OKLAHOMA (Group 3)—

190-200 D, 15-25		.19
150-160 D, 0-10	.14¼	.16
150-160 D, 15-25	.13½	.15½
150-160 E, 15-25	.13	.15
100-110 D, 0-10		.14½
Steam refined:		
631 green (treated)		.12½
600 dark green (untreated)	.04½	.05

PENNSYLVANIA—

Bright Stocks (Pennsylvania Grade No. 8 color, 140-150 at 210, 545-550 flash):		
10 pourpoint	.18	.18½
15 pourpoint	.17	.17½
25 pourpoint	.15½	.16
Steam refined:		
600	.08½	.10
650	.10½	.11
600 flash	.11	.12
630 flash	.13½	.14

Neutral Oil

(Vis. at 100° F. except Pennsylvania and color N.G.A.)

OKLAHOMA (Group 3)—

150-3	.09
180-3	.10
180-4	.09½
200-3	.10½
200-4	.10
250-3	.11½
250-4	.11
280-3	.12½
280-4	.12
300-6½	.13
400-3½	.14
100-2½ paraffin oil	.06
15-20 pourpoint:	
200-3	.10
200-4	.09½
250-3	.11
250-4	.10½
280-3	.12
280-4	.12½

GULF COAST—

Pale oils:		
200-3	.07	.07¼
300-3	.07½	.07¾
500-3½	.08½	.08¾
750-3½	.08¾	.09¼
1,200-3½	.09½	.09¾
1,500-4	.09¾	.10
Red oils:		
200-5-6	.07½	.07½
300-5-6	.07¾	.07½
500-5-6	.08	.08½
750	.08¾	.09
1,200-5-6	.09¼	.09½

CALIFORNIA (moving to dom. market)—

Pale oils:		
100-2½-3	.07¼	.08
200-2½-3	.07¼	.08
300-2½-3	.07¼	.08
400-3-4	.07½	.08
450-3-4	.07¾	.08
550-3-4	.09	.11
600-3-4	.09	.11
Red oils:		
200-4-5	.07½	.08
300-5-6	.07½	.08
350-5-6	.09¼	.11½
400-5-6	.09¼	.11½
450-5-6	.09¼	.11½
500-5-6	.09¼	.11½
600-5-6½	.09¼	.11½
700-6½ plus	.09¼	.11½
750-6½ plus	.09¼	.11½
900-6½ plus	.09¼	.11½

PENNSYLVANIA—

150 vis. at 70° F., 3 color, 400-405 flash:		
Zero pourpoint	.18½	.19
10 pourpoint	.18	.18¼
15 pourpoint	.16½	.17
25 pourpoint	.15	.15½
200 vis. at 70° F., 3 color:		
Zero pourpoint	.19½	.20
10 pourpoint	.19	.19½
15 pourpoint	.18½	.19
25 pourpoint	.17	.17½

Wax and Petrolatum

(Prices per pound)

OKLAHOMA (Group 3)—

124-126 (a.m.p.) w.c. scale	.0285	.03

PENNSYLVANIA (inland refineries)—

122-124 (a.m.p.) w.c. scale		.03
124-126 (a.m.p.) w.c. scale		.03

NEW YORK—

Wax in bags fully refined:		
122-125 (a.m.p.) wax		.0350
125-127 (a.m.p.) wax		.0360
128-130 (a.m.p.) wax		.0375
130-132 (a.m.p.) wax		.0435
133-135 (a.m.p.) wax		.0465
135-137 (a.m.p.) wax		.0490
124-126 (a.m.p.) w.s.	.0290	.03
124-126 (a.m.p.) y.s.	.0295	.03
Petrolatum in barrels, carload lots:		
Dark green	.02	.02¼
Amber	.02¾	.02⅞
Extra amber	.02⅞	.02¾
Lily white	.05½	.05¾
Snow white	.06½	.06¾
Cream	.04½	.04¾

Export Prices

GASOLINE

GULF COAST—

U. S. Motor	.04¼	.04⅜
60-62 400	.04½	.04⅝
65 octane	.04⅞	.05
68 octane	.05½	.05¼
70 octane	.05¼	.05½

LOS ANGELES—

U. S. Motor grades:		
55-65 octane	.04½	.04¾
65-69 octane	.04¾	.05
Above 69 octane	.05	.05½

KEROSENE

GULF COAST—

41-43 prime white		.03½
41-43 water white		.03½

LOS ANGELES—

41-43 water white	.05	.05¼

LUBRICANTS

(Pennsylvania Grade)

NEW YORK (f.a.s. in bbls.)—

Cylinder stocks:		
600 Warren E	.15	.15½
600 S.R. unfiltered	.16	.16½
630 S.R. unfiltered	.17	.17½
600 flash, S.R.	.17	.17½
630 flash, S.R.	.20½	.21
Bright stocks:		
8 color	.16¼	.16½

NEUTRAL OIL

200-3 color	.21½	.22
150-3 color	.19½	.20

PARAFFIN WAX

NEW YORK (prices per pound)—

123-125 a.m.p.		.0375
125-127 a.m.p.		.0387
128-130 a.m.p.		.0412
133-135 a.m.p.		.0437
135-137 a.m.p.		.0455
Crude scale:		
124-126 w.s.	.0290	.03
124-126 y.s.	.0295	.03

Crude Oil Prices

Oklahoma, Kansas, North Central and East Central Texas

East Texas (Oct. 11, 1938)* $1.10
Van, Tex. (Oct. 11, 1938)* ..... .93
Talco, Tex. (Oct. 11, 1938)* ..... .55
Rodessa, Tex. ..... .85
See North Louisiana gravity schedule
Cass and Panola counties, Texas ..... See gravity schedule
Altus and Tipton† ..... See note below
Cayuga, Tex. (Feb. 15, 1939) $0.68
Clay Creek, Tex. ..... .85

*Humble Oil & Refining Co. †Gulf Refining Co. Pure Oil Co.'s Van price, 93 cents, effective Oct. 13, 1938.

Altus and Tipton, Oklahoma, starting at below 25° at 71 cents, 2-cent spread to 40° and above at $1.03. East Texas price met by all buyers posting prices. Talco price adopted by Talco Pipe Line on Oct. 11. Cayuga posted by Pan American Pipe Line Co. Clay Creek posted by Sun Oil Co.

Southwest Texas

Salt Creek, Darst Creek, Hilbig, Carroll, Clark and Zoboroski (Oct. 11, 1938)* $0.96
Pettus (Oct. 11, 1938)* 1.29
Flour Bluff (Dec. 3, 1938)* 1.23
Darst Creek (Oct. 12, 1938)† ..... .96
Darst Creek and Bruner (Oct. 13, 1938)‡ ..... .96
Luling (Oct. 12, 1938)† ..... .87
Lytton Springs (Oct. 12, 1938)† ..... .99
Mirando (Oct. 12, 1938)† ....
Government Wells (Oct. 13, 1938) ..... See note below

*Humble Oil & Refining Co. †Magnolia Petroleum Co. Pettus price adopted by Atlantic Crude Oil Purchasing Co. ‡Gulf Refining Co.

Government Wells posted by Sun Oil Co. starts at 20° at 77 cents, 3-cent spread to 24°-24.9° at 89 cents.

Gulf Coast

Conroe, Tex. (Oct. 11, 1938)* $1.27
Black Bayou and White Castle, La. (Oct. 11, 1938)† ..... See note below
Gibson, La. (Oct. 11, 1938)† $1.04
Garden Island, La. (Oct. 12, 1938)§ .. 1.24
Lafitte, La. (Oct. 12, 1938)‡ 1.04
Cleveland, Tex. (Oct. 12, 1938)¶ 1.14
Schwab, Polk County (Feb. 20, 1939) 1.00
Hardin, Tex. (Oct. 12, 1938)¶ 1.02
Tepetate, La. (Oct. 11, 1938)§ 1.03
Villa Platte, La. (Oct. 11, 1938)§ 1.03
Abbeville, La. (Jan. 1, 1939)§ ..... See note below
Bosco, La. (Dec. 3, 1938)¶ $0.93
Creole, La. (Oct. 13, 1938)¶ ..... .96
Gueydan, Sweet Lake, and Louise, La. (Oct. 13, 1938)¶ ..... See note below
Vinton, Edgerly, Starks, Hackberry, Timbalier Bay, Quarantine Bay, and Grand Bay, La. (Oct. 13, 1938)** ....
Long Lake, Tex. (Oct. 13, 1938)** ... $1.08
Segno and Wing (Oct. 13, 1938)** ... See note below
Livington (Oct. 11, 1938)† $1.10
Gibson, La. (Oct. 11, 1938)† 1.04

*Humble Oil & Refining Co. †Shell Oil Co., Inc. ‡Texas Co. §Continental Oil Co. ¶Pure Oil Co. ¶Magnolia Petroleum Co. **Gulf Refinery Co.

Black Bayou, etc., starts at below 20° at 79 cents; 20°-20.9°, 81 cents; 21°-21.9°, 83 cents; then a 3-cent spread to 26°-26.9°, 98 cents; then a 2-cent spread to 40° and over at $1.14. Abbeville starts at below 36°, 92 cents, 2-cent spread to 40° and over at $1.02. Gueydan, etc., starts below 20°, 79 cents, 3-cent spread to 26°-26.9° at $1, and 2-cent spread to 40° and over at $1.28. Segno and Wink take Gulf Refining Co.'s Gulf Coast prices. Vinton, Edgerly, etc., schedule starts at below 18°, 75 cents, 2-cent spread to 20°-20.9° at 82 cents; then a 3-cent spread to 26°-26.9° at $1; then a 2-cent spread to 34° and over at $1.16. Schwab posted by Shell Oil Co., Inc.

North Louisiana and Arkansas

Shreveport, La. (Apr. 18, 1939) $1.05
Smackover, Ark. (Oct. 5, 1938)* ..... .73
Buckner, Magnolia, and Village, Ark. (Oct. 5, 1938)* ..... See note below
Schuler, Jones sand ..... See note below
Tullos and Urania $0.89
Cotton Valley, La. (distillate) (Dec. 23, 1938)* 1.20
Lisbon, La. (Apr. 29, 1939) ..... See note below

*Smackover posted by Standard Oil Co. of Louisiana, Oct. 5, 1938; by Magnolia Petroleum Co., Oct. 12; by Gulf Refining Co., Oct. 13; McMillan Refining Co. and Cross Refining Co. met price. Tullos and Urania posted by Hunt Oil Co. and Arkansas Fuel Oil Co.

Schuler Jones sand schedule starts at below 25°, 66 cents, with 2-cent spread to 40° and over at 98 cents; by Lion Oil Refining Co. on Oct. 5, 1938; Schuler light Morgan sand crude takes North Louisiana gravity scale along with El Dorado and Champagnolle; by Lion Oil Refining Co., Oct. 5; Buckner, Magnolia, and Village schedules posted by Standard Oil Co. of Louisiana and Lion Oil Refining Co. on Oct. 5; quote same prices as for Schuler Jones sand crude. Shreveport by Caddo Crude Oil Purchasing Co. and Atlas Oil Corp. Lisbon: Caddo Crude Oil Purchasing Co., posts below 34°, 73 cents; 34°-34.9°, 75 cents; 35° and above, 77 cents. Effective May 1, 1939, Gulf Refining Co. posted a flat price of 77 cents in Lisbon.

Middle Western States

OHIO OIL CO.
(Effective June 8, 1939)

Illinois old fields $0.95
Illinois basin 1.05
Princeton, Ind. ..... .95
Western Kentucky (June 9, 1939)† .. .90
Birk City, Ky. (June 9, 1939)¶ $0.90
Corydon, Ky. (June 9, 1939)¶ ..... .90
Greendale, Porter, Crystal and Wise, Mich. (Apr. 20, 1938)*† .. .975
Buckeye, Bentley, Edenville, Beaverton, Mich. (Apr. 20, 1939)* ..... .95
Freeman-Redding, Mich. (Apr. 20, 1939)* ..... .89
West Branch and Arenac, Mich. (Apr. 20, 1939)* ..... .74
Allegan-Kent (June 21, 1939)§ ..... .88
Bloomingdale (Apr. 10, 1939) ..... .88
Muskegon 1.00
Sherman, Mich. (Apr. 20, 1939)‡ .... .89
Eastern Kentucky:
Big Sandy River (June 9, 1939)† .. 1.02
Kentucky River (June 9, 1939)† .. 1.10

*Simrall Corp. †Ashland Refining Co. ‡Pure Transportation Co. pays above posted prices in Porter, Greendale and Sherman, effective Apr. 20. §Imperial Refining Co. ¶Sohio Oil Co. Bloomingdale posted by Tri-Lakes Corp. Kent County by Naph-Sol Refining Co.

West Texas

See gravity table.
Fisher County, Texas (Apr. 1, 1939) ..... See note below
Pecos County (Oct. 11, 1938)* $0.78
Pecos shallow (Oct. 11, 1938)† ..... .65

*Shell Oil Co., Gulf Pipe Line Co. and Humble Oil & Refining Co. †Shell Oil Co.

Fisher County, Texas, by Shell Oil Co., Inc., below 25°, 68 cents; 25°, 70 cents, with 2-cent spread to 40° and over at $1.

Rocky Mountain States

Dry Creek, Wyo. (Oct. 11, 1938)* ... $0.92
Elk Basin, Wyo. (Oct. 11, 1938)*† ... .90
Grass Creek, light, Wyo. (Oct. 11 1938)*† ..... .90
Grass Creek, heavy (Oct. 11, 1938)† . .40
Lance Creek, Wyo. (Oct. 11, 1938)* . .77
Rock Creek, Wyo. (Oct. 11, 1938)* .. 1.00
Iles, light, Colo. (Oct. 11, 1938)† .... .98
Iles, heavy, Colo. (Oct. 11, 1938)† ... .92
Dutton Creek, Wyo. (Oct. 11, 1938)† ..... See note below
Frannie, light, Wyo. (Oct. 11, 1938)† $0.55
Frannie, heavy, Wyo. (Oct. 11, 1938)† ..... .42
Hamilton dome, Wyo. (Oct. 11, 1938)† ..... .35
Midway, Wyo. (Oct. 11, 1938)† ..... See note below
Salt Creek Tensleep crude, Wyo. (Oct. 11, 1938)† $0.646
Salt Creek (Oct. 11, 1938) See note below
Canon City, Colo. (Oct. 11, 1938)‡ .. $0.90
Florence, Colo. (Oct. 11, 1938)‡ .... .90
Cat Creek, Mont. (Oct. 11, 1938)‡ ... 1.10
Big Muddy, Wyo. (Oct. 11, 1938)‡ ... .98
Lance Creek, Wyo. (Oct. 11, 1938)‡ . .77
Lea County, New Mexico ..... See West Texas gravity schedule‡
Artesia, Jackson and Maljamar ..... See gravity table‡
Fort Collins and Wellington, Colo. ..... See gravity table‡
Eddy County, New Mexico (Oct. 11, 1938)§ $0.77

*Ohio Oil Co. †Stanolind Oil & Gas Co. ‡Continental Oil Co. §Sinclair Prairie Oil Marketing Co.

Dutton Creek and Salt Creek Tensleep crudes start at below 29°, 86 cents, 2 cents spread up to 40° and over at $1.10. Salt Creek crude, excepting Tensleep, takes Standard Oil Co. of Indiana's Oklahoma-Kansas prices. Stanolind Oil & Gas Co., effective Oct. 11, discontinued posting prices in Greybull-Torchlight, Wyoming, and Hogback and Hospah, New Mexico.

Eastern States

SOUTH PENN OIL CO.
(Effective Mar. 6, 1939)

Pennsylvania Grade oil in National Transit lines (Bradford field) $2.00
Pennsylvania Grade oil in Southwest Pennsylvania lines 1.65
Pennsylvania Grade oil in Eureka Pipe Line lines 1.50
Pennsylvania Grade oil in Buckeye Pipe Line lines 1.55
Corning grade oil in Buckeye Pipe Line Co. line (Jan. 24) 1.02

TIDE WATER ASSOCIATED OIL CO. and NEW YORK TRANSIT CO
(Effective Mar. 6, 1939)

Bradford, Pa. $2.00
Allegany, N. Y. 2.00

PENNZOIL CO.
(Effective Mar. 6, 1939)

Group A $1.95
Group B 1.94
Group C 1.93
Group D 1.92
Group E 1.90

PURE OIL CO.
(Effective Mar. 6, 1939)

West Virginia $1.50

Canada

(Oct. 25, 1938, by Imperial Oil, Ltd.)

Petrolia $1.90
Oil Springs 1.97

Rocky Mountain Runs

Production estimates for week ended July 8, 1939:

	Bbl.
WYOMING	
Salt Creek	14,930
Big Muddy	1,190
Bryon	2,520
Elk Basin	310
Frannie	1,140
Garland	2,370
Grass Creek	5,030
Hamilton dome	1,140
La Barge	760
Lance Creek	16,940
Lost Soldier	1,750
Mahoney	290
Medicine Bow	1,760
Oregon Basin	2,330
Osage	800
Quealy dome	650
Rock River	2,940
Wertz	1,570
Miscellaneous	1,210
Total Wyoming	59,630
MONTANA	
Border	90
Cat Creek	570
Cut Bank	9,380
Dry Creek	1,130
Kevin-Sunburst	4,170
Pondera	920
Total Montana	16,260
COLORADO	
Florence	190
Fort Collins and Wellington	310
Wilson Creek	320
Iles dome	2,010
Moffat	300
Rangely	30
Tow Creek	150
Price	690
Total Colorado	4,000
NEW MEXICO	
Cooper	4,410
Eaves	880
West Eunice	100
Eunice	23,620
Hardy	3,790
Hobbs	13,290
Jal	710
Langlie	5,700
Lynch	530
Lynn	890
Mattix	4,700
Monument	24,740
North Lynch	40
Penrose	5,580
Rhoades	130
Skaggs	90
Skelly	1,910
South Eunice	4,030
South Lovington	470
Vacuum	10,410
Artesia-Maljamar	8,950
Getty	100
Hogback	200
Rattlesnake	580
Table Mesa	90
Total New Mexico	115,940
Total Rocky Mountain region	195,830

Crude Prices by Gravities

	1 Oklahoma	2 Oklahoma and Kansas	3 North and Central Texas	4 Louisiana and Arkansas	5 East Central Texas	6 Gray County, Texas	7 Hutchinson and Carson counties, Texas	8 Raccoon Bend, Sabanna and Tomball, Texas	9 West Texas and Lea County, N. M.	10 Fort Collins and Wellington, Colo.	11 Anahuac and Dickinson, Mirando, Duval, Texas.	12 Refugio, Texas	13 Gulf Coast Texas	14 Cass and Panola counties, Texas	15 Beaumont and West Beaumont, Texas	16 Lockport, Iowa, Cameron Louisiana	17 Artesia, Jackson and Maljamar, N. M.	18 Iowa, Louisiana
Below 18	....	....	....	....	....	....	....	....	$.53	....	$.74	$.79	$.79	....	....	$.74	....	$.75
18-18.9	....	....	....	....	....	....	....	....	.53	....	.74	.79	.79	....	$.79	.78	....	.79
19-19.9	....	....	....	....	....	....	....	....	.55	....	.77	.82	.82	....	.82	.80	....	.81
20-20.9	$.60	$.70	....	....	....	....	....	....	.57	....	.80	.85	.85	....	.85	.82	....	.83
21-21.9	.63	.72	....	....	....	....	....	$.95	.59	....	.83	.88	.88	....	.88	.85	....	.86
22-22.9	.66	.74	....	....	....	....	....	.97	.61	....	.86	.91	.91	....	.91	.88	....	.89
23-23.9	.69	.76	....	....	$.78	....	....	.99	.63	....	.89	.94	.94	....	.94	.91	....	.92
24-24.9	.72	.78	$.71	....	.80	....	....	....	....	....	....	....	....	$.73	....	....	....	....
Below 25	....	....	....	$.73	....	....	....	1.01	.65	....	.92	.97	.97	.75	.97	.94	....	.95
25-25.9	.75	.80	.73	.75	.82	....	....	1.03	.67	....	.95	1.00	1.00	.77	1.00	.97	....	.98
26-26.9	.78	.82	.75	.77	.84	....	....	1.05	.69	....	.97	1.02	1.02	.79	1.02	.99	....	1.00
27-27.9	.81	.84	.77	.79	.86	....	....	1.07	.71	$.81	.99	1.04	1.04	.81	1.04	1.01	$.61	1.02
28-28.9	.84	.86	.79	.81	.88	$.72	$.67	1.09	.73	.83	1.01	1.06	1.06	.83	1.06	1.03	.63	1.04
29-29.9	.87	.88	.81	.83	.90	.74	.69	1.11	.75	.85	1.03	1.08	1.08	.85	1.08	1.05	.65	1.06
Below 30	....	....	....	....	....	....	....	1.13	.77	.87	1.05	1.10	1.10	.87	1.10	1.07	.67	1.08
30-30.9	.90	.90	.83	.85	.92	.76	.71	1.15	.79	.89	1.07	1.12	1.12	.89	1.12	1.09	.69	1.10
31-31.9	.92	.92	.85	.87	.94	.78	.73	1.17	.81	.91	1.09	1.14	1.14	.91	1.14	1.11	.71	1.12
32-32.9	.94	.94	.87	.89	.96	.80	.75	1.19	.83	.93	1.11	1.16	1.16	.93	1.16	1.13	.73	1.14
33-33.9	.96	.96	.89	.91	.98	.82	.77	....	....	....	....	....	....	....	....	....	....	....
34-34.9	.98	.98	.91	.93	1.00	.84	.79	1.21	.85	.95	1.13	1.18	1.18	.95	1.18	....	.75	....
Below 35	....	....	....	....	....	....	....	1.23	.87	.97	1.15	1.20	1.20	.97	1.20	....	.77	....
35-35.9	1.00	1.00	.93	.95	1.02	.86	.81	1.25	.89	.99	1.17	1.22	1.22	.99	1.22	....	.79	....
36-36.9	1.02	1.02	.95	.97	1.04	.88	.83	1.27	.91	1.01	1.19	1.24	1.24	1.01	1.24	....	.81	....
37-37.9	1.04	1.04	.97	.99	1.06	.90	.85	1.29	.93	1.03	1.21	1.26	1.26	1.03	1.26	....	.83	....
38-38.9	1.06	1.06	.99	1.01	1.08	.92	.87	....	....	....	....	....	....	....	....	....	....	....
39-39.9	1.08	1.08	1.01	1.03	1.10	.94	.89	1.31	.95	1.05	1.23	1.28	1.28	1.05	1.28	....	.85	....
40 and over	1.10	1.10	1.03	1.05	1.12	.96	.91	....	....	....	....	....	....	....	....	....	....	....

New or Improved Equipment

Device That Keeps Tires From Skidding Is Applied to Clutch

The same engineering principle that prevents thousands of motor-cars from skidding on wet and slippery pavements has made possible a new type of mechanical clutch. When the multivaned tread of the General

Dual-10 and Dual-8 motor-car tires was perfected by engineers of General Tire & Rubber Co., Akron, Ohio, it was demonstrated that, under braking pressure, the many narrow vanes or ribs of rubber squirmed into a serpentine form and clung to the road surface.

Adhesion being the principal job of a clutch, no matter where used, it was only a step from the multivaned tire that clings to the pavement to the Airflex rubber clutch, whose multivaned surface clings to steel with tremendous adhesive power.

The Airflex rubber clutch has the advantage of being lighter, thus saving weight. Also it is much simpler, having only three or four parts. The Airflex clutch is self-adjusting. Rubber clutches have been successfully operated for months in marine engines and oil well rigs.

The Fawick General Co., organized to manufacture the new Airflex clutch, will be affiliated with the General Tire & Rubber Co. Thomas L. Fawick, of Akron, Ohio, inventor of the Airflex clutch, is identified with the company. Licenses for distribution of the Airflex marine type clutch have been granted to Falk Corp., of Milwaukee, Wis.

Johnson Front-Dumping Shovel Nicknamed "Speedersaurus"

Something new in excavating machinery is announced by Speeder Machinery Corp., Cedar Rapids,

Iowa. Officially called Johnson front-dumping shovel, it has been nicknamed "Speedersaurus." Using a powerful chain crowd with double leverage on the cutting edge, the action is somewhat like that of a trench-hoe, but in reverse.

This patented shovel attachment, developed for use with Speeder or Link-Belt convertible machines, has been designed for handling material that cannot pass through the bucket advantageously, and for subgrading work where a skimmer ordinarily might be used. As there is no hoist line running down to the top of the bucket, it can work in places where an ordinary shovel might foul. The unit is said to be suited particularly for land clearing work, digging out trees, stumps, boulders; drainage ditch cleanouts and the building of new ditches; rigging up and loading old concrete or macadam paving, etc.

Method of Controlling Ductility and Hardness Is Developed

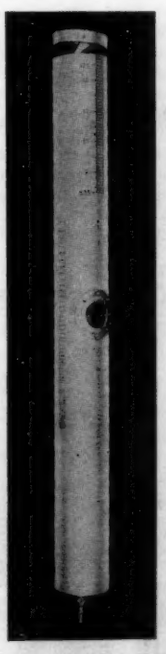
An exclusive process of controlling the hardness and ductility of seamless-steel slushpump liners is announced by the Harrisburg Steel Corp., Harrisburg, Pa. The process, developed at the Harrisburg plant by Dr. T. Holland Nelson, is known as the Nelsonizing process.

Harrisburg liners thus processed are said to possess maximum hardness and wear resistance where most desired, yet this hardness is backed up with material in a softer and more ductile condition and there is no sharp line of demarcation between the two.

"The outstanding features of this pump liner," said Dr. Nelson, "are that for almost any desired depth the inner surface can be raised to a Brinell hardness as high as 625; yet the outer surface, for any predetermined depth, can be maintained with a Brinell hardness of 200 to 250. No operation such as metal spraying, alloy insertions, case hardening or other surface preparation is resorted to."

Collins Mud-O-Meter Provides Full Analysis of Drilling-Mud

The Mud-O-Meter, introduced by William H. Collins, Box 999, Houston, Tex., consists of three parts—the instrument itself, a removable screen to remove particles of shale and sand, and the container for water into which the device is immersed to determine the weight of the drilling fluid.

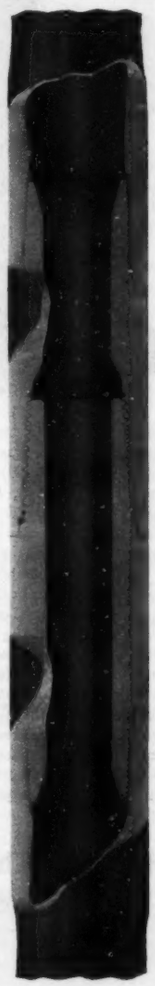


The Mud-O-Meter is made of aluminum, one-sixteenth of an inch thick, 3 in. in diameter and 28 in. long. Two look glasses, made of pyralin, are built into the tube; one at the 1,000 cc. level and the other at the 1,500 cc. level. Lines are etched into the pyralin exactly at these marks. At the bottom of the instrument are a tube and stopcock. When the cock is turned 90°, there is a stop and the cock is fully opened. The diameter of the opening is $\frac{1}{4}$-in.

Weight, viscosity, gel strength, and sand content are recorded by the Mud-O-Meter. All calibrations are marked in black. In weighing mud, the instrument does not bob around in the wind. It comes to rest immediately and no time is lost in reading the scale. It is not necessary to estimate the reading.

Reed Offers Double Streamline Tool-Joint for Slim-Hole Job

Reed double streamline tool-joints were developed by Reed Roller Bit Co., Houston, Tex., for economical slim-hole drilling and for drilling with controlled circulation.



The Reed double streamline drillpipe is made with a gradually tapering external upset (5°), and the double streamline tool-joint is flush with this upset. Double streamline drillpipe has greater fluid capacity and more velocity in returns, with less pump pressure, than internal flush tool-joints of the same outside diameter. There are no shoulders to wear away in the circulating flow stream or to obstruct the free flow of the bit cuttings, a condition that contributes to the building of a uniform mud-cake and maintaining it with the least disturbance. Additional information is contained in Catalog 0386.

Hewitt Products

Hewitt Hubber Corp., Buffalo, N. Y., announces new products and product changes:

1. Ajax tankcar and tanktruck unloading hose, a new product, is designed for the discharging or handling of gasoline under moderate suction only. It is of the same fundamental construction as Duroil unloading hose except that it carries a rubber tube and is of tank color. It is not recommended where there is constant contact with petroleum products.

2. Hewitt's Maltese Cross Hewprene gasoline hose now is furnished with a nondiscoloring Neoprene tube in all sizes, 1¼-in. to 3-in. This tube eliminates discoloration of gasoline when transmitted through the hose.

3. An addition to the Hewitt line is Conservo red-covered air hose, of the same quality as Duroil except that it has the red cover that many desire.

4. A 2½-in. size has been added to the Monarch suction-hose line.

5. Hewitt is now making a Neoprene friction-surface transmission belt. This raw-edge-construction synthetic rubber belt is sold under the "Duroil" name. Drum-built endless belts are not included in this new construction.

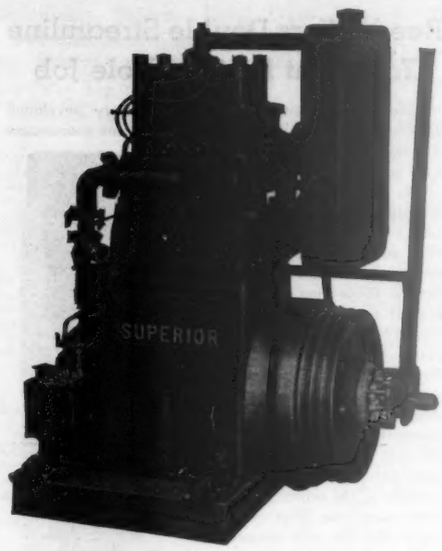
Croloy 7 for High Temperatures

Croloy 7, an alloy steel for elevated temperature service in tubular form, is announced by Babcock & Wilcox Tube Co., Beaver Falls, Pa. Croloy 7's properties are intermediate between those of Croloy 5 and Croloy 9. It already is in service in several installations of tubular products and is expected to become an important member of the B.&W. Croloy series.

The nominal percentage analysis of Croloy 7 is: Chromium, 7; carbon, 0.15 max.; molybdenum, 0.45-0.65; silicon, 1 max. Data on high-temperature strength, short-time high-temperature properties, and other characteristics are being developed and will be available soon.

Engine for Shallow Oil Fields Is Placed on Market by National

Increased use of single-well unit pumpers in shallow fields has resulted in a demand for an engine of lower horsepower built especially for oil-lifting. To meet this requirement the National Supply Co. has extended its



line of heavy-duty two-cylinder, two-cycle medium-speed vertical Superior gas engines to a smaller-type with a continuous load rating of 10 hp. at 700 r.p.m. This engine has a 4-in. bore and a 5-in. stroke, and the speed range is from 400 to 800 r.p.m. General design is the same as that of the larger Superior vertical medium-speed engines.

The engine combines the simplicity and operating economy of the horizontal slow-speed oil-country gas engines with the compactness and mobility of the higher-speed multicylinder types. The Superior Type DV engine is a self-contained unit, complete with radiator and power take-off. Installation cost and space requirements are virtually the same as those of a higher-speed engine of equal power. The crosshead-type construction reduces lubrication expense because the crankcase oil does not contact the hot piston and is not contaminated by carbon from piston and rings. Full description is given in National bulletin No. 231.

Here and There With Men Who Manufacture Equipment

D. E. Larson, sales engineer for Chicago Bridge & Iron Co., having completed a tour of the Mid-Continent and Gulf Coast fields, is in San Francisco. He plans to return by way of Portland this month to his headquarters in Chicago.

A. Pranger, chief engineer of Gulberson Corp., has returned to his office in Dallas, Tex., following a trip through the Rocky Mountain states during which he made a survey of general conditions in the Colorado, Wyoming and Montana oil fields.

Louis Bosa, engineer for Shand & Jurs Co., Berkeley, Calif., left by plane to visit the Chicago and New York offices of his company.

A. D. Kindig, formerly with Allied Equipment Co., has joined Harnischfeger Corp. as an excavator sales engineer in the Southwest territory with headquarters in Oklahoma City.

The Dozier-Graham-Eastman Advertising Agency has moved its offices from Whittier, Calif., to new and larger quarters in the Bendix Building, Los Angeles, Calif.

R. H. Hohman has been appointed Gulf Coast representative for Dayton Rubber Manufacturing Co. and is located at 6416 Navigation Boulevard, Houston, Tex.

Morris E. Leeds, founder and president of Leeds & Northrup Co., Philadelphia, Pa., has been made chairman of the board. Charles S. Redding, vice president in charge of research and engineering, has been advanced to president.

Cutler-Hammer, Inc., Milwaukee, Wis., has appointed G. S. Crane vice president in charge of sales and engineering. Mr. Crane formerly was in charge of the sales division.

Wheelco Instruments Co., 1929 South Halsted Street, Chicago, has appointed two new dealers: Industrial Equipment Co., 732 M & M Building, Houston, Tex., and Frank P. Fischer, 1608 Audubon Street, New Orleans, La.

Sales Department Promotions Are Made by Tubbs Cordage

Tubbs Cordage Co. announces the following sales department changes: Wallace I. Atherton is now sales

ATHERTON

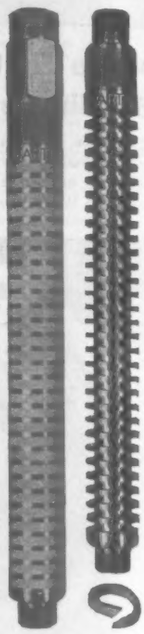
BARRY

HUGHES

manager, with headquarters in San Francisco. He formerly was in charge of southern California sales for Tubbs rope and twine. He will fill the vacancy caused by the recent death of Stuart Henshaw. Replacing Mr. Atherton in the southern California territory is Joseph H. Barry, who joined the Tubbs organization 20 years ago. Richard Hughes, Jr., has taken over sales in the northern part of California. A. J. Campbell will continue in charge of the San Francisco Bay area sales, and Clyde H. Black, oil field cordage and Pacord expert, will divide his time between the southwestern oil fields and the cordage markets of the Midwest.

Body of Martin Plunger Made From Single Piece of Metal

John N. Martin, Manufacturer, 11 West Brady Street, Tulsa, has developed a series of the patented Martin plungers to fit all sizes of tubing and rod pumps. This plunger differs from other ring-packed plungers in that the body is machined from one piece of metal with no loose spacers or washers. The packing-rings are split for mounting in the grooves and the swelling characteristic of the rings is employed to tighten them in the grooves and seal up the cuts.



Martin plungers are made in diameters from 1 in. to 4¾ in. and in various lengths for different well depths, the minimum recommendations being one ring for each 100 ft. of well depth of lift. Rings are made in various undersizes to provide the proper working fit for various kinds of well fluid.

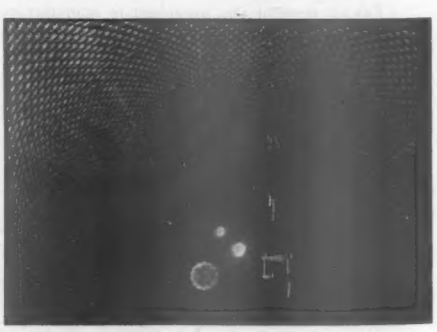
The one-piece body construction provides the rigidity necessary in pumping against high heads or pressures and eliminates any passage for fluid underneath the rings. Among the advantages claimed are long-wearing life for the rings, small wear on the working-barrel or tube, lighter rod loads and comparatively small upkeep cost.

Hexteel Armor Now Is Used to Reinforce Pressure Vessels

Hexteel surface armor, placed upon the market 8 years ago by the armor department of William F. Klemp Co., 6637 South Melvina Avenue, Chicago, for use in armoring the surface of concrete or wooden bridge decks, industrial floors, aisles, and platforms, is now being used as a reinforcement for linings in pressure vessels, holding the lining in place, preventing sloughing, and materially reducing the replacement of costly installations. One refinery processing company has adopted Hexteel in pressure vessel linings as standard, and is so advising its licensees.

An ingenious method of joining the pieces together, both endwise and sidewise, produces a continuous mat without separations or seams.

The individual mats are sufficiently flexible to take



the curvature of the vessel and the slabs are so fabricated by the manufacturer for lining purposes that they will pass through the manways for assembly in the vessel. The armor then is directly welded to the wall and dome of the chamber or spaced away from it by the use of lugs at frequent points to which the armor is bolted or welded to give additional thickness of insulation.

Some companies, instead of using prepared lining, allow the coke to accumulate in the armor, which becomes an insulator and protection against corrosion. Drawings and details will be supplied to refinery engineers upon request.

PACIFIC PUMPS ON WAY TO REFINERY IN PALESTINE

Part of a shipment of refinery pumps recently consigned to Haifa, Palestine, by Pacific Pump Works, Huntington Park., Calif.

New Constant-Head Elutriator Embodies Important Changes

The new Elutriator of the Baroid Sales Department, for determining the percentage of sand entrained in a drilling mud, incorporates changes from previous designs which experience and research have disclosed as necessary.

The most important change is in the water reservoir, now provided with a water inlet and outlet or overflow tube for maintaining a continuous flow of water and a constant head on the mud being tested. This is particularly essential for muds that are at least partly flocculated because they require a great deal of washing before the clay and sand operation is effected.

Analyzing the sand content is important because excessive sand may damage drilling equipment by abrasion and will impair the wall-building properties of a mud so as to cause deposition of a thick filter cake, with consequent interference with the passage of tools and casing.

The principle of the Elutriator is based on the ability of water flowing at a fixed rate to transport grains of insoluble material that does not exceed 200 mesh. All coarser materials remain in the tube and they represent the quantity of abrasive sand in the drilling mud.

Wire-Line Guide Is Designed to Meet Special Requirements

A new wire-line guide, known as the Economy model, has been announced by Patterson-Ballagh Corp., 1900 East Sixty-fifth Street, Los Angeles, Calif. The new model is a low-priced guide suitable for workover jobs, shallow wells, or where a guide is wanted for a short time only and investment in a more expensive guide is not justified. The Economy model, however, embodies the principle of length, rubber contact, and safety that characterizes all of the Patterson-Ballagh wire-line guides. It is simple to install, the removal of one bolt allowing its removal or installation on the rope. The construction is rigid and simple. The weight of the unit, ready for delivery, is only 35 lb. The wearing rubbers are easy to install.

Economy model rounds out the Patterson-Ballagh line, and the range now extends from this new type, which uses two small rubbers, up to a six-section guide adapted for use on heavy rigs.

Trade Literature

ARTHUR G. McKEE & CO., 2422 Euclid Avenue, Cleveland, Ohio.—Clothbound booklet giving views of foreign and domestic plants and of equipment designed or constructed by the company.

DAVIS EMERGENCY EQUIPMENT CO., 55 Van Dam Street, New York.—Bulletin on face shields to protect workers from dust, sparks, heat, and glare.

GATES RUBBER CO., Denver, Colo.—June issue, Industrial News.

AMERICAN MANGANESE STEEL DIVISION, Chicago, Ill.—64-page catalog showing manganese steel castings for equipment exposed to impact and abrasion.

JOSEPH T. RYERSON & SON, INC., Sixteenth and Rockwell Streets, Chicago.—New Ryerson stock list and steel data book; 240 pages, indexed.

PERMUTIT CO., 330 West Forty-second Street, New York.—Bulletin 2225, Permutit pressure filters.

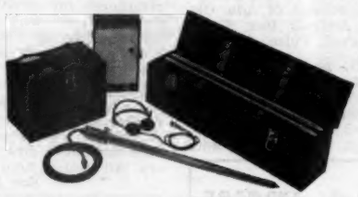
LINCOLN ELECTRIC CO., 12818 Coit Road, Cleveland, Ohio.—140-page booklet, "Simple Blueprint Reading, with Particular Reference to Welding and Welding Symbols." Price 50 cents.

Leaks in Buried Pipe Detected and Located by New Device

Designed to detect and locate leaks in water, oil, gas or other buried piping systems, the new Model 3VL locator, offered for sale by Western Instrument Co., 5115 Kinsie Street, Los Angeles, Calif., combines features designed to solve a problem that costs industrial concerns millions of dollars yearly.

The equipment consists of a sectional probe capable of going to depths reached with an earth auger or similar tools; a heavy-duty, waterproof case containing batteries and detection instruments, earphones and other auxiliary items. The electrical unit weighs, ready to use, 30 lb.

The locator may be operated by any man familiar



with pipe line maintenance, according to the company. Using the vibration differentiation method of testing pipe lines for leaks, the vibration in a pipe line caused by gas, steam, air, oil, water, or other fluids escaping under pressure, is resolved into two components; one the longitudinal, being parallel to the axis of the pipe, and the other, the transverse, being normal to the axis of the pipe.

Rectorkote Combats Corrosion Prevalent in Oil Industry

Rector Well Equipment Co., Fort Worth, Tex., has completed exhaustive tests on a new product, Rectorkote, a modification of Rectorseal, for use in combating various types of corrosion prevalent in the oil industry.

Rectorkote is said to have proven valuable in preventing inside corrosion of steel tanks in "sour crude" fields, on tank bottoms to retard salt-water corrosion, on the inside of pipe handling salt-water disposal, on the outside of pipe lines running through salty marshes, and inside wood and steel treating-tanks. It also retards, and in some cases prevents the adherence of paraffin deposits on the walls of tubing which have been coated with it, according to the manufacturer.

All ingredients of Rectorkote are insoluble in petroleum and its products, and also in salt water and dilute acids. It is applied with a spray gun, and a special type of gun is available to produce a uniform coating on the inside of pipe lines.

Side-Entering Vee-Belt Mixer

Mixing Equipment Co., Inc., Rochester, N. Y., has redesigned its "Lightnin" side-entering Vee-Belt mixer. By changing from castings to fabricating, "Lightnin" has produced a stronger, lighter-weight unit. Weight reductions are from 75 to 125 lb. per unit, depending on the model. In the redesigned model the motor is mounted on pivoted steel platform, actuated by a riser bolt, permitting maximum adjustment for belt tension or replacement of sealed outboard bearing. With this simplified construction, it is much easier to dismount motor and belts.

AMERICAN MANGANESE STEEL EXPANDS MAIN PLANT

American Manganese Steel Division of American Brake Shoe & Foundry Co. has expanded its main plant in Chicago Heights, Ill. Six additions and a new administration building are included in this improvement program.

The two-story administration building is of manganese mottled tan brick with limestone entrance and trim. In addition to executive offices, it houses the accounting and engineering departments, drafting and blueprint rooms, sales, advertising, research and purchasing department, and classrooms for a welding school.

The employes welfare building is a two-story structure with locker accommodations for the employes in five specially ventilated locker rooms, all equipped with circular foot-controlled wash fountains and drying cabinets for the clothing of those employes who work around hot operations such as furnaces. There are also adequate shower facilities. In the basement are a lunch room and a first aid room.

The other improvements include a foundry addition, new pattern storage, machine-shop addition, shipping-room addition, and new heating plant.

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NEW MEXICO WEEKLY OIL SCOUT REPORT.—Send for sample copy. Roy G. Barton, Box 968, Hobbs, N. M.

SHALLOW OIL near La Veta, Colo. No proration. Seven wells now drilling. Our blocking has locations set for 100 more wells. We need help in developing. Will sell interests in drilling wells of offsetting leases or give percentages for drills. S. W. Pressey, Box 614, Pueblo, Colo.

210 ACRES near well now rigging up, Lagrange County, Indiana, near Michigan line. Few smaller leases reasonable by owner and drilling proposition 10 miles northeast of me.
J. W. HUNT, Lagrange, Ind.

WANTED man to drill on percentage basis, Pontotoc Co. northeast of Ada, Oklahoma. Clear title. Address Box K-182, The Oil and Gas Journal, Tulsa, Okla.

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Incorporations

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CAPITAL WANTED—To buy producing properties in Texas. Experienced, legitimate. No mail promotion. References exchanged. Address Box K-171, The Oil and Gas Journal, Tulsa, Oklahoma.

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EXPERIENCED Oil Field Equipment salesman wants to associate with manufacturer who desires to sell products thru supply stores on a commission basis. Address Box K-154, The Oil and Gas Journal, Tulsa, Okla.

EXPERIENCED refinery technician will operate your old plant or build and operate new plant more efficiently and at a greater profit. Graduate M.I.T. Chemical Engineer with 13 years' industrial experience including positions as Process Supervisor and Chief Chemist. Experienced in development and manufacture of lube oils, greases, wax, asphalt, specialties, and light oils. References. Address Box K-162, The Oil and Gas Journal, Tulsa, Okla.

BOSS WANTED
A pilot with over ten thousand hours' experience with multimotor and single motor land and water aircraft, Instrument, 4-M and Radio license. Fine record and references for safety. Would like to contact executive who is particular. I know how to make the ownership of an airplane a distinct pleasure as well as a good business asset. Address Box K-181, The Oil and Gas Journal, Tulsa, Oklahoma.

LICENSED PRIVATE PILOT
Wishes to contact Pipe Line officials. By airplane I can patrol more line in less time and more efficiently. Salary secondary. All replies held confidential. Address
Box K-183,
The Oil and Gas Journal,
Tulsa, Oklahoma.

Help Wanted

IF YOU know drilling or production servicing, we will be glad to assist you in purchasing our servicing or cleanout equipment, and recommend a location where plenty of work is available from major oil companies. Cardwell Mfg. Co., Inc., P. O. Drawer 2001, Wichita, Kans.

For Sale—Maps

TEXAS and NEW MEXICO
UP-TO-DATE OIL DEVELOPMENT MAPS
Zingery Oil Map Co., Fort Worth, Tex.

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ANDREW J. BARRETT
The Philtower
Tulsa, Oklahoma.

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Sell in the most active area in the United States—The Permian Basin of West Texas and Southeastern New Mexico. From the standpoint of royalty investors this area has much to offer. Can supply you with choice non-producing royalties located on geophysical highs. Also drilling blocks, close in acreage to production, or wildcat leases. I maintain my own field men who cover this area for me. All offerings meet the requirements of the Security and Exchange Commission. Inquiries invited.

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15 years of experience.
L. H. WITWER
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WANTED producing oil royalties and oil payments in North and West Texas and New Mexico. P. O. Box 1535, Fort Worth, Texas.

PRODUCING AND NON-PRODUCING ROYALTIES
Either to buy or to sell properties of merit, communicate with
WALTER T. SCOTT
TULSA LOAN BUILDING, TULSA

WILL buy producing royalties and mineral rights in Arkansas. P. O. Box 807, El Dorado, Ark.

SACRIFICE all or any part perpetual, fully participating royalty under 80 acre tract close shallow producers for $25.00 per acre. Address Box K-172, The Oil and Gas Journal, Tulsa, Oklahoma.

IF YOU buy or sell royalties, leases or production, DON'T FAIL to check each item listed in these classified columns. They comprise the best medium of exchange available to you.

Classified Department.

Oil Industry Printing

OIL FIELD LEGAL BLANKS
Leases, assignments, releases, township plat books, well records, etc. Request on your letterhead gets free catalog. Olds Press, 215 East Third St., Tulsa, Okla.

Survey Service

REMEMBER EAST TEXAS
When all other methods fail, employ my divining or dowsing method. If oil exists this method finds it. Faults, broken, treacherous areas accurately defined. Our Watson #2, first producer Wilmington, Calif. field, located by this method. More reliable than mechanical geophysics. Ask any unbiased oil authority. Many years' experience. A wise man investigates. George Miller, 1548 Post, Torrance, Calif.

Percentage producing wells
INCREASED
Percentage dry holes
DECREASED
Investigate PETROMETER surveys.
P. O. Box 1528 Tulsa, Okla.

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Classified advertising rates: First insertion, 35 cents a line; each additional insertion, 25 cents a line, PAYABLE IN ADVANCE. Six words usually make a line. Count as a word each one-letter word and each group of figures. White-space computed at regular line rate. Allow two extra lines for blind ads. Ads of less than three lines not accepted. No formal acknowledgment is made, and proofs cannot be shown in advance of publication.

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4 Lines	1.40	2.40	3.40	4.40
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We reserve the right to withhold all advertising of questionable character. To avoid delay be sure to send remittance with copy. We will set your ad in the smallest amount of space possible and refund all overpayments. One-time insertions will not be run until fully paid. Forms close MONDAY NOON before each issue date.

THE OIL AND GAS JOURNAL
Tulsa, Oklahoma

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3000 bbl. cap. Kellogg Cracking Unit—Two Furnaces—Pacific Centrifugal Charging Pumps all Complete.

Will sell "as is and where is" or take turnkey job for dismantling and reerection.
Send us your inquiries.

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Robt. W. Duden,
2100 S. Union, Tulsa, Oklahoma

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FOR SALE

50,000 feet of 2" line pipe.
20,000 feet of 6" line pipe.
Located in Oklahoma.
We also have in Shreveport, Louisiana, a complete stock in all sizes —Line Pipe, Casing, Drill Pipe.
Branches in La-Ark-Tex area; also at St. Elmo, Illinois.
Wire, write or phone.

Louisiana Iron & Supply Company
Shreveport, Louisiana

FOR SALE — Wilson Winch used in Okla. City field. Also spudding attachment and all tools necessary for drilling, cleaning out, swabbing, or drilling in well. Also lighting equipment, steel dog house, etc. Winch mounted on 7 ton Mack truck. Ray Holman, 320 S.E. 36th St., Phone 7-2669, Oklahoma City, Okla.

USED 4" drill pipe, from 50 cents to $1.00 per foot. Other good used rotary equipment. E. E. Finefrock, 2216 No. Jordan, Oklahoma City, Oklahoma.

FOR Sale: Wax presses, chillers, pumps, valves, fittings, boilers, tanks, etc. Attractive prices. Can be inspected at our plant, Marietta, Ohio. The National Refining Co., Hanna Bldg., Cleveland, Ohio.

25 K.W. and 40 K.W. Gas Engines, 220 volts, D.C. Two 100 K.W. Gas Engine-Generator Sets, 220 volts, D.C. 7x6 Ingersoll-Rand ER-1 Air compressor. Six-inch Oster Pipe Threading Machine. Also large stock of lathes, pipe machines, milling machines, etc. Send for our list.

Terms to suit.

CINCINNATI MACHINERY & SUPPLY CO.
26 West 2nd St. Cincinnati, Ohio

FOR SALE
6 Gas or Oil Storage Tanks Sizes: 18 to 35 ft. in length, ¼ to ⅝ in. thickness, 10 ft. diameter. For more information write
S. L. GRUNDSTEIN & CO.
2120 So. High St., Columbus, Ohio.

FOR SALE OR LEASE—Class E Sanderson Cyclone 1,500-ft. drilling machine located in Ohio. Address Box K-123, The Oil and Gas Journal, Tulsa, Okla.

IMPOSSIBLE!

YES, that's what you would say if a salesman boasted that he made over 17,500 calls a week. BUT . . . the classified columns of The Oil and Gas Journal do just this.

Don't waste time and money dickering around with costly selling programs. You can reach your prospects through the medium they have chosen themselves.

For a very nominal cost, your ad can be placed in these columns, before the wealthiest and most progressive group of men in the world—OIL MEN—the readers of The Oil and Gas Journal.

Put The Journal on your payroll—make it a part of your sales force. It will outsell anything you have tried before.

Classified Department

The Oil and Gas Journal
TULSA, OKLAHOMA

Equipment Wanted

WANTED—Complete skimming plant about 1,500-bbl. cap. Must be reasonable and in first-class condition. H-S-B-1840 W. Wm., Decatur, Ill.

Business Opportunities

WANTED
GAS PROPOSITION

I am reclaiming complete gas property, many miles of pipe from 2" to 12", gas engine driven compressors, orifice and domestic meters, regulators, etc.
Would be interested in attractive propositions in which this material could be used in supplying either domestic or industrial load.
Address with full details.
Box K-164,
The Oil and Gas Journal,
Tulsa, Okla.

FOR SALE—Established oil well servicing business in Illinois Basin. Equipment consists of sixteen well servicing units of standard make mounted on good trucks. Principal work is for major companies. Owners are disposing of this highly profitable business only because of other substantial interests. For further details write Box K-170, The Oil and Gas Journal, Tulsa, Oklahoma.

Financing

CAPITAL SEEKERS

Put your project before 260 Key-Men. Cost trifling. Details free. AMSTER LEONARD, Fox Theater Building, Detroit, Michigan.

AMERICA'S 83 leading underwriters who bought a billion of securities 1938. $3.00. JOHN MORRIS, 1040 South Paxon, Philadelphia, Penna.

Legal Blanks

SINCE 1908 Burkhart's legal forms—servicing Mid-Cont. oil fields, including Ill., La., Mo., Ind. & Ky. Free catalog & samples. Burkhart Ptg. & Sta. Co., 115 So. Cinn., Tulsa, Okla.

If we do not maintain a classification exactly suited to the type of advertisement you wish to run we shall be glad to create a fitting one.

Classified Department

New York-Penna. Gas Fields

COUDERSPORT, Pa., July 8.—Four wells, only one of which was a gasser, were completed in the northern Oriskany sand gas fields during the past week. The three failures were in Steuben County, New York, and the lone successful completion was in Sharon Township, Potter County.

Two of the New York failures were in Cameron Township. Both of these wells were drilled by G. L. Cabot, Inc., one on the Lydia Owens farm and the other on the Clifford Owens farm. The Lydia Owens test topped the Onondaga at 4,098 ft., the Oriskany at 4,122 ft., and encountered salt water at 4,126 ft. After filling up 1,375 ft. in 24 hours, it was plugged and abandoned at 4,128 ft. The Clifford Owens test topped the Onondaga at 4,230 ft., the Oriskany at 4,253 ft., and got salt water at 4,261 ft. It was plugged and abandoned at 4,262 ft. after filling up 1,304 ft. with salt water in 72 hours.

Third of the Steuben County failures was the wildcat drilled by Rehler and others on the Foster estate property in Thurston Township. It encountered the Onondaga at 3,911 ft. and the Oriskany at 3,931 ft. Salt water was struck at 3,934 ft. and the well was plugged and abandoned at that depth.

Sharon Township retains the lead as the most active area in Pennsylvania, with half a dozen operations, including a new location by the New Penn Development Co. on the J. A. Torrey farm. The status of the other operations in this township follows: Sylvania Corp., shut down at 4,779 ft. on the Dickerson; Belmont Quadrangle Drilling Co., drilling at 1,920 ft. on the N. Kemp farm; Empire Producing Co., drilling at 1,777 ft. on the R. Donovan; and G. L. Cabot, Inc., drilling at 2,048 ft. on the F. Dickerson and building the rig on the M. L. Wilson. The F. Dickerson well got a show gaging 10,000 ft. at 1,515-20 ft.

Other Potter County operations are in Sweden Township, where Evjen-Harris and others are shut down at 5,424 ft. on the A. R. Mitchell after topping the Onondaga at 5,395 ft.; in Hector Township, where P. P. & L. Co. is drilling at 3,040 ft. on the E. A. Williams farm; in Bingham Township, where G. L. Cabot, Inc., is drilling at 2,286 ft. on the Ella Ransome; in Oswayo Township, where G. L. Cabot, Inc., is shut down at 140 ft. on the Michael Moran and where New Penn Development Co. is building the rig on the Rathburn and Donovan; in Ulysses Township, where Updegraph is drilling at 1,920 ft. on the William Hosley farm and G. L. Cabot, Inc., has a location on the John Stone farm; and in Clara Township, where Allegany Gas Co. is drilling at 132 ft. on the Howard Cobb and others farm.

Empire Producing Co.'s well on the E. D. Plants farm, Sharon Township, was good for 18,000,000 cu. ft. per day. It reached the Oriskany at 4,964½ ft. and got the first gas at 4,965 ft. The well was completed at 4,966 ft. It had an initial rock pressure of 1,815 lb.

In the lone Pennsylvania operation outside Potter County, the Dempseytown Gas Co. is drilling at 4,175 ft. on the Bryner farm in Elk Township, Clarion County.

With one exception, New York's operations are also limited to one county, Steuben. In the other, G. L. Cabot, Inc., is drilling at 2,239 ft. on the Dora Barber No. 2 in Willing Township, Allegany County.

Hanley & Bird are drilling at 3,275 ft. on the Lloyd Hall farm, where they encountered the Tully at 3,110-58 ft., and G. L. Cabot, Inc., is drilling at 2,450 ft. on the Federal Land Bank farm, Cameron Township.

New Penn Development Co. and Cunningham Natural Gas Co. are drilling at 3,912 ft. on the E. Walrath farm, where they encountered the Tully at 3,414-62 ft.; and New York State Natural Gas Co. is drilling at 3,407 ft. on the Arthur Whiting farm, after drilling through the Tully at 3,352-95 ft., in Jasper Township.

New York State Natural Gas Co. is drilling at 1,430 ft. on the William Carpenter farm and at 1,085 ft. on the Lester Gurnsey farm in Troupsburg Township.

G. L. Cabot, Inc., is drilling at 3,934 ft. on the Charles Crane No. 3 after drilling through the Tully at 3,100-52 ft.; topping the Onondaga at 3,903 ft. and the Oriskany at 3,933 ft.; and Williamsport Natural Gas Co. is drilling at 150 ft. on the John Dorr farm in Woodhull Township.

The only remaining operations are in Greenwood Township, where G. L. Cabot, Inc., is fishing at 3,745 ft. on the Lewis Webber farm, where it found the Tully at 3,568-3,621 ft., and in Tuscarora Township, where New York State Natural Gas Co. is drilling at 2,640 ft. on the John Hollis farm.

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